Manufacturing Learning Australia

NATIONALLY RECOGNISED TRAINING

Plastics, Rubber & Cablemaking Industries

Assessment Guidelines
Qualifications Framework
Competency Standards

Training Package code: PMB98
November 1998

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for the

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This project was conducted by a consortium headed by
Total Training and Performance Solutions (Sydney)
and supported by
Abbinga Ryan and Associates (Melbourne)
Training and Assessment Services (Perth).

Contents

1 Assessment system overview

What is a Training Package?

1.1 Training Packages are a key feature of vocational education and training for industries in Australia. They are part of the National Training Framework which aims to make training and regulatory arrangements simpler, and more flexible and relevant to the needs of people working in the industry.

The process manufacturing industries comprise several major sectors (chemical, oil refining, hydrocarbons extraction and oil and gas transmission; plastics and rubber products and cablemaking; cement, concrete, clay, glass and ceramics; and iron and steel manufacturing).

What does a Training Package look like?

1.2 Training Packages consist of three endorsed components and three major non-endorsed components.

Endorsed components of the Training Package comprise:
- competency standards
- assessment guidelines, and
- qualifications framework.

Non-endorsed components of the Training Package include:
- learning strategies including curriculum and learning resources
- assessment materials, and
- professional development materials.

A simple guide to the National Training Framework is included in the ANTA brochure *Training packages: An integrated approach to flexible training delivery*[1].

Why develop assessment guidelines?

1.3 Assessment guidelines are part of the endorsed components of the Training Packages. It is intended that these assessment guidelines will be broadly common to all process manufacturing Training Packages (though contextualised for each package).

The purpose of developing assessment guidelines is to set out the mechanisms and processes for ensuring reliable, flexible, fair and valid assessment of achievement against nationally endorsed industry competency standards.

These assessment guidelines bring together all of the common processes, approaches and systems involved in assessment across all process manufacturing Training Packages. Assessment details specific to an industry sector will be contained in the non-endorsed components of the relevant Training Package.

What is the role of an assessor?

[1]Australian National Training Authority, *Training Packages: An integrated approach to flexible training delivery*, 1997

1.4 The primary role of an assessor for national recognition purposes is to collect sufficient evidence, then objectively assess and judge the competence of a candidate against national competency standards.

1.5 Assessments against the competencies in the Training Package will be carried out in accordance with these endorsed guidelines. The guidelines include the necessary competencies for those conducting assessments, and provide for those situations where more than one person may contribute to the assessment and where the required technical and assessment competencies may not all be held by any one person.

What is the role of Registered Training Organisations in assessment?

1.6 All assessment for national recognition purposes is undertaken by, or auspiced[2] through, a Registered Training Organisation.[3]

Registered Training Organisations will provide a range of training products and services to support the delivery of process manufacturing Training Packages.

Provision has been made for Registered Training Organisations which will conduct assessment and award qualifications and statements of attainment. An *assessment only Registered Training Organisation* may be established to serve an industry sector, a whole industry or multiple industries.

1.7 The Registered Training Organisation keeps and maintains records of assessments against competency standards, and issues the statements of attainment and qualifications.

1.8 Non-registered training organisations (that is, organisations which deliver training, but are not registered) or enterprises may form partnerships with RTOs in order to jointly provide training and assessment.

What about qualifications in this new system?

1.9 Outcomes of assessment are reported directly in terms of:

- statements of attainment against the relevant competency standards and/or
- qualifications under the Australian Qualifications Framework.

Who will monitor the new process?

[2]Auspicing is a process whereby a Registered Training Organisation validates assessment carried out by industry or individual enterprises.

[3]A Registered Training Organisation (RTO) is a nationally recognised organisation which delivers training, or may be registered for assessment and the award of qualifications and statements of attainment (refer to Glossary).

1.10 A key feature of the assessment system will be the external auditing process. The State or Territory training authorities will monitor compliance to the assessment system as a requirement of registration.

1.11 Registered Training Organisations have the responsibility of ensuring that assessors are competent and maintain their competence, as required by these assessment guidelines.

2 Assessment principles

What are the principles upon which assessment is based?

2.1 The process manufacturing assessment system meets the requirements of the 1996 Ministerial Council (MINCO) In Principle Agreement.

2.2 Competency standards are the benchmarks for assessment. Assessment will be against the relevant competency standards[4].

2.3 Competency comprises the following aspects:

- $ task skills (performance of individual tasks)
- $ task management skills (managing a number of different tasks within the job)
- $ contingency management skills (responding to problems, breakdowns and changes in routine)
- $ job/role environment skills (dealing with the responsibilities and expectations of the workplace).

2.4 Assessment is an integral component of training.

2.5 Assessment must be reliable, flexible, fair and valid:

- $ To be *reliable*, the assessment methods and procedures must ensure that competency standards are applied consistently.
- $ To be *flexible*, assessment should be able to take place on the job, off the job or a combination of both. It should allow for diversity regarding how, where and when competencies have been acquired.
- $ To be *fair*, the assessment must not advantage or disadvantage particular candidates or groups of candidates.
- $ To be *valid*, the assessment has to assess what it claims to assess. Sufficient evidence must be collected that is relevant to the standard being assessed.

[4]Competency standards for the process manufacturing industries are available from Manufacturing Learning Australia.

3 Assessment options

What are the available options for assessment?

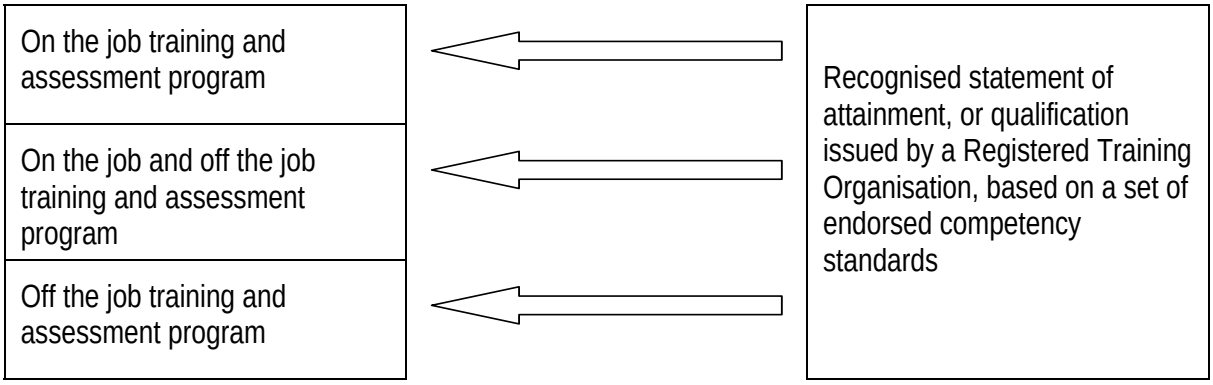
3.1 Assessment may occur in a range of environments, appropriate to the context and nature of the competencies being assessed:

- on the job
- off the job, or
- a combination of both.

3.2 Units of competence may be assessed separately or in combination.

3.3 Assessment may occur as part of a structured training program or through an *assessment only* process, where candidates receive recognition of current competencies.

3.4 Each assessment option must provide the opportunity for the candidate to demonstrate competency. Whilst the preferred mode of assessment is through demonstration of skills in a workplace setting, this requirement can be met in a number of ways:



3.5 The issuing of a qualification within the process manufacturing industries is based on achievement of competence in a number of prescribed competency units as detailed in the qualifications framework of the relevant training package. A statement of attainment recognises the partial achievement of a qualification and should list the competency unit or units in which competence is achieved.

3.6 There are a number of ways by which appropriate experience towards the development of competency may be gained:

- $ standard employment
- $ placement in an enterprise for work experience
- $ participation in a New Apprenticeship arrangement
- $ use of a simulated work environment.

3.7 All credentials identified within process manufacturing Training Packages are potential New Apprenticeships.

Key features of New Apprenticeships are:

- $ negotiated training programs leading to a national qualification
- $ the training program involves paid work and structured training which may be on the job or a combination of on the job and off the job
- $ a training agreement registered with the appropriate State Training Authority.

Any of the pathways identified in these assessment guidelines and detailed in process manufacturing Training Packages may be the basis of a New Apprenticeship training program.

4 Assessor competencies

What are the requirements of a competent assessor?

4.1 Assessment in the process manufacturing industries should be carried out by a person or persons who meet the following requirements

- competent in the following units of competency from the *Competency Standards for Assessment*[5]:
  - the assessment competency unit: *Conduct assessment in accordance with an established assessment procedure*, and
  - extension unit: *Plan and review assessment*
- competent in the specific competency units being assessed, as defined by the relevant competency standards
- have current knowledge of the industry=s roles and practice
- have knowledge of current enterprise practices for the job or the role against which the performance is being assessed.

How may the requirements for competent assessors be used?

4.2 The requirement to use competent assessors may be met through the use of any of the following options:

- an *assessor* who is competent against the assessor competency standards and the relevant vocational competencies (see section 4.1, above)
- an *assessor* who is competent against the assessment competency standards and who has *ready access to another person* who is competent in, and can advise the assessor on, the relevant industry competencies at least to the level being assessed
- a *person from the workplace* with the relevant vocational competencies at least to the level being assessed who utilises industry endorsed assessment procedures with the outcome being validated by an *external assessor* who is competent against the assessor standards.

[5] *Competency Standards for Assessment* are available from the National Business Services ITAB.

How may assessors remain competent?

4.3 The requirement for current knowledge of industry roles and practice could be met through an appropriate combination of:

- $ current work
- $ relevant release to industry
- $ exposure to industry visits and training sessions
- $ attendance at professional development activities focused on emerging/current best practice in industry

and may be evidenced by:

- $ recent work history (paid or unpaid)
- $ provision of a statement of professional or workplace activities supported by a responsible industry referee.

How may assessment be carried out?

4.4 Assessments against the competencies in the Training Package will be carried out in accordance with these endorsed guidelines. The guidelines include the necessary competencies for those conducting assessments, and provide for those situations where more than one person may contribute to the assessment, and where the required technical and assessment competencies may not all be held by any one person.

5 Designing assessment

What criteria must be met when designing assessment?

5.1 The relevant competency standards are the benchmark for assessment.

5.2 The design of assessment needs to ensure that all aspects of competence are covered:

- task skills (performance of individual tasks)
- task management skills (managing a number of different tasks within the job)
- contingency management skills (responding to problems, breakdowns and changes in routine)
- job/role environment skills (dealing with the responsibilities and expectations of the workplace)
- relevant underpinning knowledge.

5.3 Assessment must address the performance criteria specified in the two relevant units of the *Competency Standards for Assessment:*

- *Conduct assessment in accordance with an established assessment procedure*, and the extension unit
- *Plan and review assessment*.

5.4 Evidence gathering methods must be gender and culturally inclusive and take into account the language, literacy and numeracy skills of both candidate and assessor. Assessors should consider:

- incorporating a range of assessment techniques (as per section 6.7)
- assessing in the workplace wherever possible, using familiar skills and materials
- eliminating any unnecessary reading or written assessment - if these skills are not required to do the job, they should not be part of the assessment
- ensuring understanding of questions by rephrasing to clarify and using the language and terms of the job and the workplace
- encouraging the candidate to ask questions to clarify instructions
- providing clarification of purpose and process of assessment
- considering cultural and gender issues when setting up the assessment.

5.5 In all pathways, where candidates have difficulty achieving competence in a particular unit of competency, it may indicate the necessity to further develop the key competencies required to attain that competency unit of competency[6].

[6]The relationship between the key competencies and the units of competency is detailed at the foot of each competency unit.

6 Conducting assessments

What should be kept in mind when conducting assessments?

6.1 Identify which of the relevant competency standards is being assessed, and be familiar with the content and context of the standard and how it is applied in the workplace.

Assessments must meet the standards as set down in the *Competency Standards for Assessment*[7]:

- *Conduct assessment in accordance with an established assessment procedure*, and the extension unit
- *Plan and review assessment*.

6.2 Evidence gathering methods must be appropriate to the context of the assessment, the assessor and the candidate.

6.3 Means of evidence collection must meet the principles of validity, authenticity, sufficiency, currency and consistency:

- *Valid* evidence collection ensures that the assessment assesses what it claims to assess - evidence collected is relevant to the activity and demonstrates that the performance criteria have been met.

- *Authentic* assessment relates primarily to achieving Aa close correspondence between the assessment situation and the situation in which the candidate will one day operate@[8]. A practical driving test is, in this sense, a wholly authentic assessment process. In other contexts where complete authenticity will usually not be practicable, every effort should be made to optimise authenticity within necessary cost and operational constraints.

- A *sufficient* assessment requires that sufficient evidence is collected to demonstrate competence in the standard being assessed.

- *Currency* of evidence collection ensures that the evidence demonstrates both that the person is *currently* competent, and that the person is competent in terms of the most recent standards.

- A *consistent* assessment ensures both that the evidence collected demonstrates consistent achievement of the specified standard by the person being assessed, and that the outcomes of the assessment process are substantially consistent irrespective of where, when and by whom the assessment is conducted.

[7] *Competency Standards for Assessment,* are available from the National Business Services ITAB.
[8] Alison Wolf, *Competence-based Assessment*, Buckingham (UK), Open University Press, 1995, p 135

See also section 6.7, below.

6.4 Following the assessment process, assessment outcomes need to be recorded and securely stored, and feedback provided in terms of performance against the relevant process manufacturing competency standards[9].

6.5 Where assessment is occurring in the workplace:

- $ Take into account that the person being assessed may have had little experience of structured training and assessment. Carefully explain the process of making judgements against the standards, and make the candidate feel as relaxed as possible.
- $ Consult on the assessment process with the parties involved.
- $ The assessment should take place over a reasonable length of time so that the candidate has the opportunity to demonstrate work responsibility and contingency management. Third party reports of workplace performance, if available, are helpful in this regard.
- $ Consider the other staff in the workplace likely to be affected by the process. All staff directly or indirectly involved in the process should be briefed on the factors which will impact on them, such as duration or changes in work routine.
- $ Ensure that assessment is as compatible as possible with the normal pattern of work and causes minimal disruption. If the process involves candidates being away from their work area for a period of time, arrangements should be made with their immediate supervisor to cover their duties for that period of time.
- $ Assessment resources included in the non-endorsed component of the process manufacturing Training Packages will provide ways in which to address these matters.

6.6 Where assessment is occurring out of the workplace:

- $ Ensure that assessment takes place in a situation as close as possible to workplace reality.
- $ Ensure that all aspects of competence are assessed.
- $ The assessment should take place over a reasonable length of time so that the candidate has the opportunity to demonstrate work responsibility and contingency

[9]For further information, refer to page 28 of the *Competency Standards for Assessment*.

management. Third party reports of workplace performance, if available, are helpful in this regard.

- $ Documents used in assessment should closely reflect workplace reality.

- $ Assessment resources listed in the non-endorsed component of the relevant Training Package will provide ways in which to address these matters.

6.7 The following are some of the commonly used methods of gathering evidence:

- $ demonstration
- $ questioning
- $ workplace performance
- $ simulation
- $ evaluation of products/services
- $ oral presentation
- $ projects/assignments
- $ work-based research assignments
- $ written tests
- $ skills portfolio
- $ third party reports.

It is good practice to use more than one method of evidence collection in an assessment[10].

[10]For further information regarding methods of gathering evidence, refer to the *Assessor Training Program*, available from Australian Training Products.

7 Recording and reporting assessment outcomes

How are assessment outcomes to be recorded?

7.1 Assessment outcomes must be reported and recorded in terms of the relevant competency standards.

7.2 Qualifications and statements of attainment issued by Registered Training Organisations will comply with the requirements of the Australian Recognition Framework and the specific qualification requirements of the relevant process manufacturing Training Package.

7.3 Results will be recorded as achievement of a qualification (refer to the relevant Training Package) or a statement of attainment against the relevant competency standards.

7.4 Responsibility for recording, storing and accessing assessment outcomes rests with the Registered Training Organisation that issues the qualification or statement of attainment under the Australian Qualifications Framework.

8 Appeal and reassessment process

What process is available to dispute an assessment outcome?

8.1 An appeals and reassessment process is an integral part of all training and assessment pathways leading to a statement of attainment or qualification under the Australian Qualifications Framework.

8.2 The appeals and reassessment process is developed and managed by the RTO.

As a first step, appeals should be made to and reassessments done by the RTO.

Should this fail, responsibility rests with the relevant State Training Authority for the implementation of fair and impartial appeals processes.

8.3 The appeals and reassessment process is described to the candidate before assessment takes place, as part of the explanation of the overall assessment procedure.

8.4 Parties involved in the assessment have the right, under the appeals and reassessment process, to request reassessment at a later time if reasonable grounds are demonstrated for questioning the original outcome.

9 External audit of Registered Training Organisations

Is there any external monitoring of the assessment process?

9.1 External audit of RTOs is a requirement of the National Training Framework. External audits are seen as important quality assurance activities to improve and further develop the assessment processes and outcomes.

9.2 Audit processes will be initiated and managed by the State Training Authorities with the involvement of industry.

9.3 Standards for audit of the RTO must include compliance with these assessment guidelines.

10 Assessment references

These assessment guidelines apply specifically to the plastics, rubber and cablemaking Training Package, available from Australian Training Products or from Manufacturing Learning Australia.

Process manufacturing competency standards:

Plastics, Rubber and Cablemaking Competency Standards
Chemical, Hydrocarbons and Oil Refining Industries Competency Standards
Guideline Competency Standards for Laboratory Assistants
Cement Manufacturing Competency Standards
Manufactured Concrete Products Competency Standards
Glass Manufacturing Competency Standards
Clay and Ceramics Competency Standards
National Steel Industry Competency Standards

Available from Manufacturing Learning Australia, Suite 302, 368 Sussex St, Sydney NSW 2000, phone (02) 9264 9822, fax 02 9264 9938 email mlaust@ozemail.com.au

Training and assessment competency standards:

Assessment and Workplace Training-Training Package BSZ98
Guide to the Competency Standards for Assessment
Frontline Management Competencies

Available from the Business Services Training Australia, ground floor, Como Centre, 650

National Administration competency standards:

Administration Training Package BSA97
Assessor=s Manual: Assessing Administration Competencies in the Workplace

Available from the Admin Training Company, Level 4, 464 St Kilda Road, Melbourne, Vic, 3004, phone (03) 9820 1300, fax: (03) 9821 4392

Transport and distribution competency standards:

National Training Package - Warehousing Competency Standards

Available from Transport and Distribution Australia, Level 1, 351 William St, West Melbourne 3003, phone 03 9320 4242, fax 03 9320 4243

ANTA publications:

Training Packages: An integrated approach to flexible training delivery

Available from the Australian National Training Authority. GPO Box 3120, Brisbane Qld 4001, phone (07) 3246 2300, fax (07) 3246 2490

ATP publications:
National Training Packages

Chemical, Hydrocarbons and Oil Refining Industries Training Package PMA98
National Training Package - Warehousing Competency Standards
Assessment and Workplace Training-Training Package BSZ98
Administration Training Package BSA97
Assessor Training Program

Available from Australian Training Products, GPO Box 5347BB, Melbourne, Vic, 3001, phone (03) 9630 9836, fax: (03) 9639 4684

11 Glossary

Appeals process	The process where disputes involving the outcome of an assessment may be reassessed
Assessment	The process of collecting evidence and making judgements on whether competency has been achieved
Assessment centre	A nationally registered training organisation which provides skills recognition services (assessment only)
Auspicing	A process whereby a Registered Training Organisation validates assessment carried out by industry or individual enterprises
Assessment system	A process designed to ensure that assessment decisions made in relation to many individuals, by many assessors in many situations, are consistent, fair and valid
Candidate	Person to be assessed
Competency	Competency comprises the knowledge and skills and the consistent application of that knowledge and skills to the standard of performance required in employment.
Customisation	The process of adding enterprise-specific information to the endorsed national standards so that the standards reflect the work of a particular workplace, whilst maintaining the integrity of the standard
Evidence	The set of information which, when matched against the relevant criteria, provides proof of the candidate=s competency. Evidence can take many forms and be gathered from a number of sources.
Integrated assessment	An approach to assessment that covers multiple elements and/or units from relevant competency standards. The integrated approach attempts to combine knowledge, understanding, problem solving, technical skills, attitudes and ethics into assessment tasks.
MLA	Manufacturing Learning Australia (MLA) is the National Process Manufacturing Industry Training Body Ltd. MLA is responsible for the development of this Training Package.
MINCO	Ministerial Council of Federal and State Ministers of Vocational Education and Training
NTFC	National Training Framework Committee: the body responsible for endorsing Training Packages

Reassessment	An assessment activity initiated as a result of an appeal against the outcome of a previous assessment
Records of assessment	The information that is retained by the organisation that is responsible for issuing the nationally recognised qualification or statement of attainment of the assessment outcome
Reporting of assessment outcomes	The way in which the outcomes of assessment processes are reported to candidates, employers and other relevant groups
Review of assessment process	Planned and systematic analysis of the assessment system

Registered Training Organisation (RTO)	A nationally registered training organisation - TAFE institution, private provider, RPL and assessment agency, Group Training Company, industry organisation or enterprise - that is also registered with a State/Territory training authority. Registered Training Organisations may be registered for a range of training products and services, including some or all of the following:
	$ provision of training and assessment
	$ provision of skills recognition services (assessment only)
	$ development and approval of training programs to deliver training packages
	$ the issuing of qualifications/statements of attainment.

Statement of attainment	A statement of attainment will be issued to candidates where they have partially completed a qualification.

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Qualifications Framework

for the

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LIST OF QUALIFICATIONS

There are 32 qualifications, across 4 qualification levels and 15 qualification streams, under the plastics, rubber and cablemaking Training Package. Certificates 1 and 4 are generic qualifications, while each of the certificate II and certificate III qualifications is designated for a particular qualification stream (broadly corresponding to a process or processes). The qualification codes and titles are as overleaf. The compulsory and elective units, and the packaging rules, for each qualification are detailed in subsequent pages, as indicated overleaf.

QUALIFICATION PACKAGING RULES AND LIST OF COMPETENCIES

Certificate I in Process Manufacturing PMB10198

To be eligible for the Certificate I in Process Manufacturing, candidates must be assessed as competent in 7 units selected from the list below. Of the 7 units, there are 4 compulsory units that must be completed (listed below). Of the other 3 units, up to 2 units may be selected from other Training Package(s) from a certificate 1 qualification. The remaining unit(s) are to be selected from the elective bank.

The Australian Qualifications Framework Certificate I specifies:

> Breadth, depth and complexity of knowledge and skills would prepare a person to perform a defined range of activities *most of which may be routine and predictable.*
>
> Applications may include a variety of employment related skills including:
> - preparatory access and participation skills
> - broad based induction skills
> - and/or specific workplace skills.
>
> They may also include participation in a team or work group.

Certificate I in Process Manufacturing	
COMPULSORY UNITS	
Complete workplace documents	PMB COMM01 A
Follow occupational health & safety procedures	PMB OHS01 A
Participate in interactive workplace communication	PMB COMM03 A
Shift materials safely by hand	PMB HANDLE03 A
ELECTIVE UNITS - SELECT THREE UNITS, AT LEAST ONE FROM THE LIST BELOW	
Apply measurement and calculations to workplace activities	PMB CALC01 A
Collect waste for recycling or safe disposal	PMB WASTE01 A
Complete workplace induction	PMB WKOPS01 A
Conduct housekeeping activities	PMB MAINT01 A
Follow hygiene procedures	PMB PROD33 A
Follow workplace quality procedures	PMB QUAL01 A
Use manual handling equipment for load shifting	PMB HANDLE04 A
Work with others in a team	PMB WKOPS06 A
Up to 2 of these 3 elective units may be from other Training Package(s) from AQF I.	

Certificate IV in Process Manufacturing PMB40198

To be eligible for the Certificate IV in Process Manufacturing, candidates must be assessed as competent in 7 units selected from the elective bank. There are no compulsory units. Candidates can select up to 2 units from other Training Package(s) from a certificate IV qualification.

The Australian Qualifications Framework Certificate IV specifies:

Breadth, depth and complexity of knowledge and competencies would cover:

- *a broad range of varied activities or*
- *application in a wider variety of contexts most of which are complex and non-routine.*

Leadership and guidance are involved when organising activities of self and others as well as contributing to technical solutions of a non-routine or contingency nature.

Performance of a broad range of skilled applications including:

- requirements to evaluate and analyse current practices,
- development of new criteria and procedures for performing current practices, and
- provision of some leadership and guidance to others in the application and planning of the skills.

Applications involve responsibility for, and limited organisation of, others.

Certificate IV in Process Manufacturing

NO COMPULSORY UNITS - SELECT SEVEN UNITS, AT LEAST FIVE FROM THE LIST BELOW

Apply materials and process knowledge to coordinate work operations (designated for the materials and process)	PMB PRC
Apply workplace procedures to improve work area performance	PMB WKOPS02 A
Collect and present workplace data and information	PMB COMM02 A
Complete procurement operations	PMB ORG01 A
Conduct quality audits	PMB QUAL03 A
Contribute to the development of a workplace learning environment	PMB TRAIN06 A
Coordinate quality customer service	PMB CUST02 A
Coordinate the conduct of maintenance	PMB MAINT04 A
Deliver training (category 2)	PMB TRAIN04 A
Develop and maintain a safe workplace	PMB OHS09 A
Establish and manage effective workplace relationships	PMB MANAGE02 A
Facilitate and capitalise on change and innovation	PMB MANAGE05 A
Implement and monitor continuous improvement systems and processes	PMB MANAGE04 A
Manage operations to achieve planned outcomes	PMB MANAGE03 A
Manage personal work priorities and professional development	PMB MANAGE01 A
Manage workplace information	PMB WKOPS07 A
Organise operations in confined or restricted spaces	PMB OHS10 A
Organise production processes	PMB ORG03 A
Participate in, lead and facilitate work teams	PMB WKOPS08 A
Prepare for training (category 2)	PMB TRAIN04 A
Prepare production materials estimates	PMB ORG04 A
Supervise emergency/incident situations	PMB OHS05 A

Up to 2 of these 7 units may be from other Training Package(s) from AQF IV.

Certificate II in Process Manufacturing (Production Support) PMB20198

To be eligible for the Certificate II in Process Manufacturing (Production Support), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, the 2 compulsory units must be completed in addition to 5 units selected from the elective bank. Up to 2 of these 5 elective units can be drawn from other Training Package(s) from a certificate II qualification.

The Australian Qualifications Framework certificate II requires:

> Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is:
> - $ *a clearly defined range of contexts in which the choice of actions required is usually clear*
> - $ *limited complexity in the range of options to be applied*
>
> Performance of a prescribed range of functions involving:
> - $ *known routines and procedures*
> - $ *some accountability for the quality of outcomes*.
>
> Applications may include *some complex or non-routine activities* involving *individual responsibility or autonomy and/or collaboration with others* through members of a group or team.

Certificate II in Process Manufacturing (Production Support)	
COMPULSORY UNITS	
Apply emergency/incident procedures	PMB OHS04 A
Use materials and process knowledge to complete work operations (designated for the materials and process)	PMB PROD3
ELECTIVE UNITS - SELECT FIVE UNITS, AT LEAST THREE FROM THE LIST BELOW	
Assemble and organise materials	PMB PREP05 A
Chemically cut materials (designated for the materials and process)	PMB PROD38 A
Chemically join materials (designated for the materials and process)	PMB PROD37 A
Conduct compounding operations	PMB PROD52 A
Cut, shape and fabricate materials	PMB PROD45 A
Finish products for customer use	PMB FINISH01 A
Fit attachments to products	PMB FINISH02 A
Hand application of surface coatings	PMB PROD49 A
Hand decorate products	PMB FINISH05 A
Hand lay up composites	PMB PROD47 A
Hand mix materials	PMB PROD46 A
Handle hazardous substances/dangerous goods	PMB OHS02 A
Load and unload goods	PMB HANDLE02 A
Maintain equipment	PMB MAINT02 A
Mechanically cut materials (designated for the materials and process)	PMB PROD40 A
Mechanically join materials (designated for the materials and process)	PMB PROD39 A
Operate hand held air/power equipment for production processes	PMB PROD36 A
Package goods	PMB FINISH04 A
Prepare materials to formulae	PMB PREP06 A
Prepare surfaces for coating	PMB PROD48 A
Process orders and dispatch products	PMB HANDLE01 A
Provide service to customers	PMB CUST01 A
Receive goods	PMB ORG05 A
Repair product imperfections (designated for the materials and process)	PMB FINISH03 A
Sample, inspect and test products to specifications (designated for the materials and process)	PMB PROD41 A
Store product on reels or spools	PMB HANDLE09 A
Store products	PMB HANDLE08 A
Transfer loads with slings	PMB HANDLE05 A
Use computers in the workplace	PMB COMP 01 A
Use cranes and gantries to shift loads	PMB HANDLE07 A
Use information technology devices in the workplace	PMB COMP02 A
Up to 2 of these 5 elective units may be from other Training Package(s) from AQF II.	

Certificate III in Process Manufacturing (Production Support) PMB30198

To be eligible for the Certificate III in Process Manufacturing (Production Support), candidates must be assessed as competent in 7 units selected from the elective bank. Up to 2 of these 7 units can be drawn from other Training Package(s) from a certificate III qualification.

The Australian Qualifications Framework certificate III requires:

Breadth, depth and complexity of knowledge and competencies would cover:

- *selecting, adapting and transferring skills and knowledge to new environments*
- *providing technical advice and some leadership in resolution of specific problems*.

This would be applied across a range of roles in a variety of contexts with *some complexity in the extent and choice of options available.*

The qalification requires

- performance of a *defined range of skilled operations*, usually within a *range of broader related activities* involving *known routines, methods and procedures*
- *some discretion and judgement* in the selection of equipment, services or contingency measures
- known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.

Certificate III in Process Manufacturing (Production Support)	
NO COMPULSORY UNITS - SELECT SEVEN UNITS, AT LEAST FIVE FROM THE LIST BELOW	
Apply first aid in the workplace	PMB OHS06 A
Conduct assessment in accordance with established assessment procedures	PMB ASSESS01 A
Conduct operations in confined or restricted spaces	PMB OHS03 A
Coordinate shift handover	PMB WKOPS05 A
Coordinate waste disposal	PMB WASTE02 A
Deliver training (category 1)	PMB TRAIN02 A
Develop assessment tools	PMB ASSESS03 A
Extension unit B plan and review assessment	PMB ASSESS02 A
Implement and monitor occupational health & safety procedures	PMB OHS07 A
Induct new team members	PMB WKOPS03 A
Interpret and use workplace statistical information	PMB CALC02 A
Interpret job specifications	PMB WKOPS04 A
Interpret technical specifications	PMB PREP02 A
Isolate equipment faults	PMB MAINT03 A
Organise occupational health & safety	PMB OHS08 A
Prepare for production (designated for the materials and process)	PMB PREP01 A
Prepare for training (category 1)	PMB TRAIN01 A
Review training (category 1)	PMB TRAIN03 A
Set up equipment for continuous operations (designated for the materials and process)	PMB PREP03 A
Shut down work area	PMB PROD43 A
Troubleshoot production faults and defects	PMB PROD42 A
Use precision measuring equipment	PMB CALC03 A
Use production stock and inventory systems	PMB ORG02 A
Use quality improvement systems and processes	PMB QUAL02 A
Vulcanise products (unit under review)	(TBA)
Up to 2 of these 7 elective units may be from other Training Package(s) from AQF III.	

Certificate II in Process Manufacturing (Rubber - Injection Moulding) PMB20298

To be eligible for the Certificate II in Process Manufacturing (Rubber - Injection Moulding), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, there are 3 compulsory units that must be completed (listed in the table below). Of the other 4 units, up to 2 units may be selected from other Training Package(s) from a certificate II qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate II requires:

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is:

- *a clearly defined range of contexts in which the choice of actions required is usually clear*
- *limited complexity in the range of options to be applied*.

Performance of a prescribed range of functions involving:

- *known routines and procedures*
- *some accountability for the quality of outcomes*.

Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others through members of a group or team.

Certificate II in Process Manufacturing (Rubber - Injection Moulding)	
COMPULSORY UNITS	
Apply emergency/incident procedures	PMB OHS04 A
Use materials and process knowledge to complete work operations (designated for the materials and process)	PMB PROD35 A
Monitor process operations (designated for the materials and process)	PMB PROD30 A
ELECTIVE UNITS - SELECT FOUR UNITS, AT LEAST TWO FROM THE LIST BELOW	
Assemble and organise materials	PMB PREP05 A
Conduct compounding operations	PMB PROD52 A
Finish products for customer use	PMB FINISH01 A
Fit attachments to products	PMB FINISH02 A
Hand application of surface coatings	PMB PROD49 A
Hand decorate products (designated for the materials and process)	PMB FINISH05 A
Hand lay up composites	PMB PROD47 A
Hand mix materials	PMB PROD46 A
Handle hazardous substances/dangerous goods	PMB OHS02 A
Load and unload goods	PMB HANDLE02 A
Maintain equipment	PMB MAINT02 A
Mechanically cut materials (designated for the materials and process)	PMB PROD40 A
Mechanically join materials (designated for the materials and process)	PMB PROD39 A
Operate forklifts for load shifting	PMB HANDLE06 A
Operate hand held air/power equipment for production processes	PMB PROD36 A
Package goods	PMB FINISH04 A
Prepare materials to formulae	PMB PREP06 A
Prepare surfaces for coating	PMB PROD48 A
Process orders and dispatch products	PMB HANDLE01 A
Provide service to customers	PMB CUST01 A
Receive goods	PMB ORG05 A
Repair product imperfections (designated for the materials and process)	PMB FINISH03 A
Run granulating equipment	PMB PROD59 A
Run high speed mixing equipment	PMB PROD55 A
Sample, inspect and test products to specifications (designated for the materials and process)	PMB PROD41 A
Store products	PMB HANDLE08 A
Transfer loads with slings	PMB HANDLE05 A
Use computers in the workplace	PMB COMP01 A
Use cranes and gantries to shift loads	PMB HANDLE07 A
Use information technology devices in the workplace	PMB COMP02 A
Up to 2 of these 4 elective units may be from other Training Package(s) from AQF II.	

Certificate III in Process Mfg (Rubber - Injection Moulding) PMB30298

To be eligible for the Certificate III in Process Manufacturing (Rubber Injection Moulding), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, the 1 compulsory unit must be completed. Of the other 6 units, up to 2 units may be selected from other Training Package(s) from a certificate III qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate III requires:

Breadth, depth and complexity of knowledge and competencies would cover:

- *selecting, adapting and transferring skills and knowledge to new environments*
- *providing technical advice and some leadership in resolution of specific problems*.

This would be applied across a range of roles in a variety of contexts with *some complexity in the extent and choice of options available.*

The qualification requires

- performance of a *defined range of skilled operations*, usually within a *range of broader related activities* involving *known routines, methods and procedures*
- *some discretion and judgement* in the selection of equipment, services or contingency measures
- known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.

Certificate III in Process Manufacturing (Rubber - Injection Moulding)	
COMPULSORY UNIT	
Run injection moulding equipment	PMB PROD10 A
ELECTIVE UNITS - SELECT SIX UNITS, AT LEAST FOUR FROM THE LIST BELOW	
Apply first aid in the workplace	PMB OHS06 A
Change equipment dies or moulds (designated for the materials and process)	PMB PREP04 A
Conduct assessment in accordance with established assessment procedures	PMB ASSESS01 A
Construct jigs and fixtures	PMB PROD57 A
Construct moulds for composites	PMB PROD56 A
Coordinate shift handover	PMB WKOPS05 A
Coordinate waste disposal	PMB WASTE02 A
Deliver training (category 1)	PMB TRAIN02 A
Develop assessment tools	PMB ASSESS03 A
Develop patterns	PMB PROD58 A
Extension unit B plan and review assessment	PMB ASSESS02 A
Implement and monitor occupational health & safety procedures	PMB OHS07 A
Induct new team members	PMB WKOPS03 A
Interpret and use workplace statistical information	PMB CALC02 A
Interpret job specifications	PMB WKOPS04 A
Interpret technical specifications	PMB PREP02 A
Isolate equipment faults	PMB MAINT03 A
Machine lay up of composites	PMB PROD22 A
Monitor product quality standards	PMB PROD34 A
Organise occupational health & safety	PMB OHS08 A
Prepare for training (category 1)	PMB TRAIN01 A
Review training (category 1)	PMB TRAIN03 A
Set up and operate printing and decorating equipment for rigid products	PMB PROD17 A
Set up equipment for continuous operations (designated for the materials and process)	PMB PREP03 A
Shut down work area	PMB PROD43 A
Troubleshoot production faults and defects (designated for the materials and process)	PMB PROD42 A
Use precision measuring equipment	PMB CALC03 A
Use production stock and inventory systems	PMB ORG02 A
Use quality improvement systems and processes	PMB QUAL02 A
Vulcanise products (unit under review)	(TBA)
Up to 2 of these 6 elective units may be from other Training Package(s) from AQF III.	

Certificate II in Process Mfg (Plastics - Injection Moulding) PMB20398

To be eligible for the Certificate II in Process Manufacturing (Plastics- Injection Moulding), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, there are 3 compulsory units that must be completed (listed in the table below). Of the other 4 units, up to 2 units may be selected from other Training Package(s) from a certificate II qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate II requires:

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is:

- *a clearly defined range of contexts in which the choice of actions required is usually clear*
- *limited complexity in the range of options to be applied*.

Performance of a prescribed range of functions involving:

- *known routines and procedures*
- *some accountability for the quality of outcomes*.

Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others through members of a group or team.

Certificate II in Process Manufacturing (Plastics - Injection Moulding)	
COMPULSORY UNITS	
Apply emergency/incident procedures	PMB OHS04 A
Use materials and process knowledge to complete work operations (designated for the materials and process)	PMB PROD35 A
Monitor process operations (designated for the materials and process)	PMB PROD30 A
ELECTIVE UNITS - SELECT FOUR UNITS, AT LEAST TWO FROM THE LIST BELOW	
Assemble and organise materials	PMB PREP05 A
Conduct compounding operations	PMB PROD52 A
Finish products for customer use	PMB FINISH01 A
Fit attachments to products	PMB FINISH02 A
Hand application of surface coatings	PMB PROD49 A
Hand decorate products (designated for the materials and process)	PMB FINISH05 A
Hand lay up composites	PMB PROD47 A
Hand mix materials	PMB PROD46 A
Handle hazardous substances/dangerous goods	PMB OHS02 A
Load and unload goods	PMB HANDLE02 A
Maintain equipment	PMB MAINT02 A
Mechanically cut materials (designated for the materials and process)	PMB PROD40 A
Mechanically join materials (designated for the materials and process)	PMB PROD39 A
Operate forklifts for load shifting	PMB HANDLE06 A
Operate hand held air/power equipment for production processes	PMB PROD36 A
Package goods	PMB FINISH04 A
Prepare materials to formulae	PMB PREP06 A
Prepare surfaces for coating	PMB PROD48 A
Process orders and dispatch products	PMB HANDLE01 A
Provide service to customers	PMB CUST01 A
Receive goods	PMB ORG05 A
Repair product imperfections (designated for the materials and process)	PMB FINISH03 A
Run granulating equipment	PMB PROD59 A
Run high speed mixing equipment	PMB PROD55 A
Sample, inspect and test products to specifications (designated for the materials and process)	PMB PROD41 A
Store products	PMB HANDLE08 A
Transfer loads with slings	PMB HANDLE05 A
Use computers in the workplace	PMB COMP01 A
Use cranes and gantries to shift loads	PMB HANDLE07 A
Use information technology devices in the workplace	PMB COMP02 A
Up to 2 of these 4 elective units may be from other Training Package(s) from AQF II.	

Certificate III in Process Mfg (Plastics - Injection Moulding) PMB30398

To be eligible for the Certificate III in Process Manufacturing (Plastics - Injection Moulding), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, the 1 compulsory unit must be completed. Of the other 6 units, up to 2 units may be selected from other Training Package(s) from a certificate III qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate III requires:

Breadth, depth and complexity of knowledge and competencies would cover:

- *selecting, adapting and transferring skills and knowledge to new environments*
- *providing technical advice and some leadership in resolution of specific problems*.

This would be applied across a range of roles in a variety of contexts with *some complexity in the extent and choice of options available.*

The qualification requires

- performance of a *defined range of skilled operations*, usually within a *range of broader related activities* involving *known routines, methods and procedures*
- *some discretion and judgement* in the selection of equipment, services or contingency measures
- known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.

Certificate III in Process Manufacturing (Plastics - Injection Moulding)	
COMPULSORY UNIT	
Run injection moulding equipment	PMB PROD10 A
ELECTIVE UNITS - SELECT SIX UNITS, AT LEAST FOUR FROM THE LIST BELOW	
Apply first aid in the workplace	PMB OHS06 A
Change equipment dies or moulds (designated for the materials and process)	PMB PREP04 A
Conduct assessment in accordance with established assessment procedures	PMB ASSESS01 A
Construct jigs and fixtures	PMB PROD57 A
Construct moulds for composites	PMB PROD56 A
Coordinate shift handover	PMB WKOPS05 A
Coordinate waste disposal	PMB WASTE02 A
Deliver training (category 1)	PMB TRAIN02 A
Develop assessment tools	PMB ASSESS03 A
Develop patterns	PMB PROD58 A
Extension unit B plan and review assessment	PMB ASSESS02 A
Implement and monitor occupational health & safety procedures	PMB OHS07 A
Induct new team members	PMB WKOPS03 A
Interpret and use workplace statistical information	PMB CALC02 A
Interpret job specifications	PMB WKOPS04 A
Interpret technical specifications	PMB PREP02 A
Isolate equipment faults	PMB MAINT03 A
Machine lay up of composites	PMB PROD22 A
Monitor product quality standards	PMB PROD34 A
Organise occupational health & safety	PMB OHS08 A
Prepare for training (category 1)	PMB TRAIN01 A
Review training (category 1)	PMB TRAIN03 A
Set up and operate printing and decorating equipment for rigid products	PMB PROD17 A
Set up equipment for continuous operations (designated for the materials and process)	PMB PREP03 A
Shut down work area	PMB PROD43 A
Troubleshoot production faults and defects (designated for the materials and process)	PMB PROD42 A
Use precision measuring equipment	PMB CALC03 A
Use production stock and inventory systems	PMB ORG02 A
Use quality improvement systems and processes	PMB QUAL02 A
Up to 2 of these 6 elective units may be from other Training Package(s) from AQF III.	

Certificate II in Process Manufacturing (Plastics - Blow Moulding) PMB20498

To be eligible for the Certificate II in Process Manufacturing (Plastics - Blow Moulding), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, there are 3 compulsory units that must be completed (listed in the table below). Of the other 4 units, up to 2 units may be selected from other Training Package(s) from a certificate II qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate II requires:

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is:

- *a clearly defined range of contexts in which the choice of actions required is usually clear*
- *limited complexity in the range of options to be applied*.

Performance of a prescribed range of functions involving:

- *known routines and procedures*
- *some accountability for the quality of outcomes*.

Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others through members of a group or team.

Certificate II in Process Manufacturing (Plastics - Blow Moulding)	
COMPULSORY UNITS	
Apply emergency/incident procedures	PMB OHS04 A
Use materials and process knowledge to complete work operations (designated for the materials and process)	PMB PROD35 A
Monitor process operations (designated for the materials and process)	PMB PROD30 A
ELECTIVE UNITS - SELECT FOUR UNITS, AT LEAST TWO FROM THE LIST BELOW	
Assemble and organise materials	PMB PREP05 A
Conduct compounding operations	PMB PROD52 A
Finish products for customer use	PMB FINISH01 A
Fit attachments to products	PMB FINISH02 A
Hand application of surface coatings	PMB PROD49 A
Hand decorate products (designated for the materials and process)	PMB FINISH05 A
Hand lay up composites	PMB PROD47 A
Hand mix materials	PMB PROD46 A
Handle hazardous substances/dangerous goods	PMB OHS02 A
Load and unload goods	PMB HANDLE02 A
Maintain equipment	PMB MAINT02 A
Mechanically cut materials (designated for the materials and process)	PMB PROD40 A
Mechanically join materials (designated for the materials and process)	PMB PROD39 A
Operate forklifts for load shifting	PMB HANDLE06 A
Operate hand held air/power equipment for production processes	PMB PROD36 A
Package goods	PMB FINISH04 A
Prepare materials to formulae	PMB PREP06 A
Prepare surfaces for coating	PMB PROD48 A
Process orders and dispatch products	PMB HANDLE01 A
Provide service to customers	PMB CUST01 A
Receive goods	PMB ORG05 A
Repair product imperfections (designated for the materials and process)	PMB FINISH03 A
Run granulating equipment	PMB PROD59 A
Run high speed mixing equipment	PMB PROD55 A
Sample, inspect and test products to specifications (designated for the materials and process)	PMB PROD41 A
Store products	PMB HANDLE08 A
Transfer loads with slings	PMB HANDLE05 A
Use computers in the workplace	PMB COMP01 A
Use cranes and gantries to shift loads	PMB HANDLE07 A
Use information technology devices in the workplace	PMB COMP02 A
Up to 2 of these 4 elective units may be from other Training Package(s) from AQF II.	

Certificate III in Process Manufacturing (Plastics - Blow Moulding) PMB30498

To be eligible for the Certificate III in Process Manufacturing (Plastics - Blow Moulding), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, the 1 compulsory unit must be completed. Of the other 6 units, up to 2 units may be selected from other Training Package(s) from a certificate III qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate III requires:

Breadth, depth and complexity of knowledge and competencies would cover:

- *selecting, adapting and transferring skills and knowledge to new environments*
- *providing technical advice and some leadership in resolution of specific problems*.

This would be applied across a range of roles in a variety of contexts with *some complexity in the extent and choice of options available.*

The qualification requires

- performance of a *defined range of skilled operations*, usually within a *range of broader related activities* involving *known routines, methods and procedures*
- *some discretion and judgement* in the selection of equipment, services or contingency measures
- known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.

Certificate III in Process Manufacturing (Plastics - Blow Moulding)	
COMPULSORY UNIT	
Run blow moulding equipment	PMB PROD11 A
ELECTIVE UNITS - SELECT SIX UNITS, AT LEAST FOUR FROM THE LIST BELOW	
Apply first aid in the workplace	PMB OHS06 A
Change equipment dies or moulds (designated for the materials and process)	PMB PREP04 A
Conduct assessment in accordance with established assessment procedures	PMB ASSESS01 A
Coordinate shift handover	PMB WKOPS05 A
Coordinate waste disposal	PMB WASTE02 A
Deliver training (category 1)	PMB TRAIN02 A
Develop assessment tools	PMB ASSESS03 A
Develop patterns	PMB PROD58 A
Extension unit B plan and review assessment	PMB ASSESS02 A
Implement and monitor occupational health & safety procedures	PMB OHS07 A
Induct new team members	PMB WKOPS03 A
Interpret and use workplace statistical information	PMB CALC02 A
Interpret job specifications	PMB WKOPS04 A
Interpret technical specifications	PMB PREP02 A
Isolate equipment faults	PMB MAINT03 A
Monitor product quality standards	PMB PROD34 A
Organise occupational health & safety	PMB OHS08 A
Prepare for training (category 1)	PMB TRAIN01 A
Review training (category 1)	PMB TRAIN03 A
Set up and operate printing and decorating equipment for rigid products	PMB PROD17 A
Set up and operate film printing and decorating equipment	PMB PROD31 A
Set up equipment for continuous operations (designated for the materials and process)	PMB PREP03 A
Shut down work area	PMB PROD43 A
Troubleshoot production faults and defects (designated for the materials and process)	PMB PROD42 A
Use precision measuring equipment	PMB CALC03 A
Use production stock and inventory systems	PMB ORG02 A
Use quality improvement systems and processes	PMB QUAL02 A
Up to 2 of these 6 elective units may be from other Training Package(s) from AQF III.	

Certificate II in Process Manufacturing (Plastics - Extrusion) PMB20598

To be eligible for the Certificate II in Process Manufacturing (Plastics - Extrusion), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, there are 3 compulsory units that must be completed (listed in the table below). Of the other 4 units, up to 2 units may be selected from other Training Package(s) from a certificate II qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate II requires:

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is:

- *a clearly defined range of contexts in which the choice of actions required is usually clear*
- *limited complexity in the range of options to be applied*.

Performance of a prescribed range of functions involving:

- *known routines and procedures*
- *some accountability for the quality of outcomes*.

Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others through members of a group or team.

Certificate II in Process Manufacturing (Plastics - Extrusion)	
COMPULSORY UNITS	
Apply emergency/incident procedures	PMB OHS04 A
Use materials and process knowledge to complete work operations (designated for the materials and process)	PMB PROD35 A
Monitor process operations (designated for the materials and process)	PMB PROD30 A
ELECTIVE UNITS - SELECT FOUR UNITS, AT LEAST TWO FROM THE LIST BELOW	
Assemble and organise materials	PMB PREP05 A
Conduct compounding operations	PMB PROD52 A
Finish products for customer use	PMB FINISH01 A
Fit attachments to products	PMB FINISH02 A
Hand application of surface coatings	PMB PROD49 A
Hand decorate products (designated for the materials and process)	PMB FINISH05 A
Hand lay up composites	PMB PROD47 A
Hand mix materials	PMB PROD46 A
Handle hazardous substances/dangerous goods	PMB OHS02 A
Load and unload goods	PMB HANDLE02 A
Maintain equipment	PMB MAINT02 A
Mechanically cut materials (designated for the materials and process)	PMB PROD40 A
Mechanically join materials (designated for the materials and process)	PMB PROD39 A
Operate forklifts for load shifting	PMB HANDLE06 A
Operate hand held air/power equipment for production processes	PMB PROD36 A
Package goods	PMB FINISH04 A
Prepare materials to formulae	PMB PREP06 A
Prepare surfaces for coating	PMB PROD48 A
Process orders and dispatch products	PMB HANDLE01 A
Provide service to customers	PMB CUST01 A
Receive goods	PMB ORG05 A
Repair product imperfections (designated for the materials and process)	PMB FINISH03 A
Run granulating equipment	PMB PROD59 A
Run high speed mixing equipment	PMB PROD55 A
Sample, inspect and test products to specifications (designated for the materials and process)	PMB PROD41 A
Store products	PMB HANDLE08 A
Transfer loads with slings	PMB HANDLE05 A
Use computers in the workplace	PMB COMP01 A
Use cranes and gantries to shift loads	PMB HANDLE07 A
Use information technology devices in the workplace	PMB COMP02 A
Up to 2 of these 4 elective units may be from other Training Package(s) from AQF II.	

Certificate III in Process Manufacturing (Plastics - Extrusion) PMB30598

To be eligible for the Certificate III in Process Manufacturing (Plastics - Extrusion), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, the 1 compulsory unit must be completed. Of the other 6 units, up to 2 units may be selected from other Training Package(s) from a certificate III qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate III requires:

Breadth, depth and complexity of knowledge and competencies would cover:

- *selecting, adapting and transferring skills and knowledge to new environments*
- *providing technical advice and some leadership in resolution of specific problems*.

This would be applied across a range of roles in a variety of contexts with *some complexity in the extent and choice of options available.*

The qualification requires

- performance of a *defined range of skilled operations*, usually within a *range of broader related activities* involving *known routines, methods and procedures*
- *some discretion and judgement* in the selection of equipment, services or contingency measures
- known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.

Certificate III in Process Manufacturing (Plastics - Extrusion)	
COMPULSORY UNIT	
Run extrusion line (designated for sheet, profile and compounding)	PMB PROD13 A
ELECTIVE UNITS - SELECT SIX UNITS, AT LEAST FOUR FROM THE LIST BELOW	
Apply first aid in the workplace	PMB OHS06 A
Change equipment dies or moulds (designated for the materials and process)	PMB PREP04 A
Conduct assessment in accordance with established assessment procedures	PMB ASSESS01 A
Coordinate shift handover	PMB WKOPS05 A
Coordinate waste disposal	PMB WASTE02 A
Deliver training (category 1)	PMB TRAIN02 A
Develop assessment tools	PMB ASSESS03 A
Extension unit B plan and review assessment	PMB ASSESS02 A
Implement and monitor occupational health & safety procedures	PMB OHS07 A
Induct new team members	PMB WKOPS03 A
Interpret and use workplace statistical information	PMB CALC02 A
Interpret job specifications	PMB WKOPS04 A
Interpret technical specifications	PMB PREP02 A
Isolate equipment faults	PMB MAINT03 A
Monitor product quality standards	PMB PROD34 A
Organise occupational health & safety	PMB OHS08 A
Prepare for training (category 1)	PMB TRAIN01 A
Review training (category 1)	PMB TRAIN03 A
Set up and operate printing and decorating equipment for rigid products	PMB PROD17 A
Set up equipment for continuous operations (designated for the materials and process)	PMB PREP03 A
Shut down work area	PMB PROD43 A
Troubleshoot production faults and defects (designated for the materials and process)	PMB PROD42 A
Use precision measuring equipment	PMB CALC03 A
Use production stock and inventory systems	PMB ORG02 A
Use quality improvement systems and processes	PMB QUAL02 A
Up to 2 of these 6 elective units may be from other Training Package(s) from AQF III.	

Certificate II in Process Manufacturing (Rubber - Extrusion) PMB20698

To be eligible for the Certificate II in Process Manufacturing (Rubber - Extrusion), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, there are 3 compulsory units that must be completed (listed in the table below). Of the other 4 units, up to 2 units may be selected from other Training Package(s) from a certificate II qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate II requires:

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is:

- *a clearly defined range of contexts in which the choice of actions required is usually clear*
- *limited complexity in the range of options to be applied*.

Performance of a prescribed range of functions involving:

- *known routines and procedures*
- *some accountability for the quality of outcomes*.

Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others through members of a group or team.

Certificate II in Process Manufacturing (Rubber - Extrusion)	
COMPULSORY UNITS	
Apply emergency/incident procedures	PMB OHS04 A
Use materials and process knowledge to complete work operations (designated for the materials and process)	PMB PROD35 A
Monitor process operations (designated for the materials and process)	PMB PROD30 A
ELECTIVE UNITS - SELECT FOUR UNITS, AT LEAST TWO FROM THE LIST BELOW	
Assemble and organise materials	PMB PREP05 A
Conduct compounding operations	PMB PROD52 A
Finish products for customer use	PMB FINISH01 A
Fit attachments to products	PMB FINISH02 A
Hand application of surface coatings	PMB PROD49 A
Hand decorate products (designated for the materials and process)	PMB FINISH05 A
Hand lay up composites	PMB PROD47 A
Hand mix materials	PMB PROD46 A
Handle hazardous substances/dangerous goods	PMB OHS02 A
Load and unload goods	PMB HANDLE02 A
Maintain equipment	PMB MAINT02 A
Mechanically cut materials (designated for the materials and process)	PMB PROD40 A
Mechanically join materials (designated for the materials and process)	PMB PROD39 A
Operate forklifts for load shifting	PMB HANDLE06 A
Operate hand held air/power equipment for production processes	PMB PROD36 A
Package goods	PMB FINISH04 A
Prepare materials to formulae	PMB PREP06 A
Prepare surfaces for coating	PMB PROD48 A
Process orders and dispatch products	PMB HANDLE01 A
Provide service to customers	PMB CUST01 A
Receive goods	PMB ORG05 A
Repair product imperfections (designated for the materials and process)	PMB FINISH03 A
Run granulating equipment	PMB PROD59 A
Run high speed mixing equipment	PMB PROD55 A
Sample, inspect and test products to specifications (designated for the materials and process)	PMB PROD41 A
Store products	PMB HANDLE08 A
Transfer loads with slings	PMB HANDLE05 A
Use computers in the workplace	PMB COMP01 A
Use cranes and gantries to shift loads	PMB HANDLE07 A
Use information technology devices in the workplace	PMB COMP02 A
Up to 2 of these 4 elective units may be from other Training Package(s) from AQF II.	

Certificate III in Process Manufacturing (Rubber - Extrusion) PMB30698

To be eligible for the Certificate III in Process Manufacturing (Rubber - Extrusion), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, the 1 compulsory unit must be completed. Of the other 6 units, up to 2 units may be selected from other Training Package(s) from a certificate III qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate III requires:

Breadth, depth and complexity of knowledge and competencies would cover:

- *selecting, adapting and transferring skills and knowledge to new environments*
- *providing technical advice and some leadership in resolution of specific problems*.

This would be applied across a range of roles in a variety of contexts with *some complexity in the extent and choice of options available.*

The qualification requires

- performance of a *defined range of skilled operations*, usually within a *range of broader related activities* involving *known routines, methods and procedures*
- *some discretion and judgement* in the selection of equipment, services or contingency measures
- known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.

Certificate III in Process Manufacturing (Rubber - Extrusion)	
COMPULSORY UNIT	
Run extrusion line (designated for sheet, profile and compounding)	PMB PROD13 A
ELECTIVE UNITS - SELECT SIX UNITS, AT LEAST FOUR FROM THE LIST BELOW	
Apply first aid in the workplace	PMB OHS06 A
Change equipment dies or moulds (designated for the materials and process)	PMB PREP04 A
Conduct assessment in accordance with established assessment procedures	PMB ASSESS01 A
Coordinate shift handover	PMB WKOPS05 A
Coordinate waste disposal	PMB WASTE02 A
Deliver training (category 1)	PMB TRAIN02 A
Develop assessment tools	PMB ASSESS03 A
Extension unit B plan and review assessment	PMB ASSESS02 A
Implement and monitor occupational health & safety procedures	PMB OHS07 A
Induct new team members	PMB WKOPS03 A
Interpret and use workplace statistical information	PMB CALC02 A
Interpret job specifications	PMB WKOPS04 A
Interpret technical specifications	PMB PREP02 A
Isolate equipment faults	PMB MAINT03 A
Monitor product quality standards	PMB PROD34 A
Organise occupational health & safety	PMB OHS08 A
Prepare for training (category 1)	PMB TRAIN01 A
Review training (category 1)	PMB TRAIN03 A
Set up and operate printing and decorating equipment for rigid products	PMB PROD17 A
Set up equipment for continuous operations (designated for the materials and process)	PMB PREP03 A
Shut down work area	PMB PROD43 A
Troubleshoot production faults and defects (designated for the materials and process)	PMB PROD42 A
Use precision measuring equipment	PMB CALC03 A
Use production stock and inventory systems	PMB ORG02 A
Use quality improvement systems and processes	PMB QUAL02 A
Up to 2 of these 6 elective units may be from other Training Package(s) from AQF III.	

Certificate II in Process Manufacturing (Plastics - Blown Film) PMB20798

To be eligible for the Certificate II in Process Manufacturing (Plastics - Blown Film), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, there are 3 compulsory units that must be completed (listed in the table below). Of the other 4 units, up to 2 units may be selected from other Training Package(s) from a certificate II qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate II requires:

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is:

- *a clearly defined range of contexts in which the choice of actions required is usually clear*
- *limited complexity in the range of options to be applied*.

Performance of a prescribed range of functions involving:

- *known routines and procedures*
- *some accountability for the quality of outcomes*.

Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others through members of a group or team.

Certificate II in Process Manufacturing (Plastics - Blown Film)	
COMPULSORY UNITS	
Apply emergency/incident procedures	PMB OHS04 A
Use materials and process knowledge to complete work operations (designated for the materials and process)	PMB PROD35 A
Monitor process operations (designated for the materials and process)	PMB PROD30 A
ELECTIVE UNITS - SELECT FOUR UNITS, AT LEAST TWO FROM THE LIST BELOW	
Assemble and organise materials	PMB PREP05 A
Conduct compounding operations	PMB PROD52 A
Finish products for customer use	PMB FINISH01 A
Fit attachments to products	PMB FINISH02 A
Hand application of surface coatings	PMB PROD49 A
Hand decorate products (designated for the materials and process)	PMB FINISH05 A
Hand lay up composites	PMB PROD47 A
Hand mix materials	PMB PROD46 A
Handle hazardous substances/dangerous goods	PMB OHS02 A
Load and unload goods	PMB HANDLE02 A
Maintain equipment	PMB MAINT02 A
Mechanically cut materials (designated for the materials and process)	PMB PROD40 A
Mechanically join materials (designated for the materials and process)	PMB PROD39 A
Operate forklifts for load shifting	PMB HANDLE06 A
Operate hand held air/power equipment for production processes	PMB PROD36 A
Package goods	PMB FINISH04 A
Prepare materials to formulae	PMB PREP06 A
Prepare surfaces for coating	PMB PROD48 A
Process orders and dispatch products	PMB HANDLE01 A
Provide service to customers	PMB CUST01 A
Receive goods	PMB ORG05 A
Repair product imperfections (designated for the materials and process)	PMB FINISH03 A
Run granulating equipment	PMB PROD59 A
Run high speed mixing equipment	PMB PROD55 A
Sample, inspect and test products to specifications (designated for the materials and process)	PMB PROD41 A
Store products	PMB HANDLE08 A
Transfer loads with slings	PMB HANDLE05 A
Use computers in the workplace	PMB COMP01 A
Use cranes and gantries to shift loads	PMB HANDLE07 A
Use information technology devices in the workplace	PMB COMP02 A
Up to 2 of these 4 elective units may be from other Training Package(s) from AQF II.	

Certificate III in Process Manufacturing (Plastics - Blown Film) PMB30798

To be eligible for the Certificate III in Process Manufacturing (Plastics - Blown Film), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, the 1 compulsory unit must be completed. Of the other 6 units, up to 2 units may be selected from other Training Package(s) from a certificate III qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate III requires:

Breadth, depth and complexity of knowledge and competencies would cover:

- *selecting, adapting and transferring skills and knowledge to new environments*
- *providing technical advice and some leadership in resolution of specific problems*.

This would be applied across a range of roles in a variety of contexts with *some complexity in the extent and choice of options available.*

The qualification requires

- performance of a *defined range of skilled operations*, usually within a *range of broader related activities* involving *known routines, methods and procedures*
- *some discretion and judgement* in the selection of equipment, services or contingency measures
- known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.

Certificate III in Process Manufacturing (Plastics - Blown Film)	
COMPULSORY UNIT	
Run blown film line	PMB PROD16 A
ELECTIVE UNITS - SELECT SIX UNITS, AT LEAST FOUR FROM THE LIST BELOW	
Apply first aid in the workplace	PMB OHS06 A
Change equipment dies or moulds (designated for the materials and process)	PMB PREP04 A
Conduct assessment in accordance with established assessment procedures	PMB ASSESS01 A
Construct moulds for composites	PMB PROD56 A
Construct jigs and fixtures	PMB PROD57 A
Coordinate shift handover	PMB WKOPS05 A
Coordinate waste disposal	PMB WASTE02 A
Deliver training (category 1)	PMB TRAIN02 A
Develop assessment tools	PMB ASSESS03 A
Extension unit B plan and review assessment	PMB ASSESS02 A
Implement and monitor occupational health & safety procedures	PMB OHS07 A
Induct new team members	PMB WKOPS03 A
Interpret and use workplace statistical information	PMB CALC02 A
Interpret job specifications	PMB WKOPS04 A
Interpret technical specifications	PMB PREP02 A
Isolate equipment faults	PMB MAINT03 A
Machine lay up of composites	PMB PROD22 A
Monitor product quality standards	PMB PROD34 A
Organise occupational health & safety	PMB OHS08 A
Prepare for training (category 1)	PMB TRAIN01 A
Review training (category 1)	PMB TRAIN03 A
Set up and operate printing and decorating equipment for rigid products	PMB PROD17 A
Set up equipment for continuous operations (designated for the materials and process)	PMB PREP03 A
Shut down work area	PMB PROD43 A
Troubleshoot production faults and defects (designated for the materials and process)	PMB PROD42 A
Use precision measuring equipment	PMB CALC03 A
Use production stock and inventory systems	PMB ORG02 A
Use quality improvement systems and processes	PMB QUAL02 A
Up to 2 of these 6 elective units may be from other Training Package(s) from AQF III.	

Certificate II in Process Manufacturing (Rubber - Tyre Retreading) PMB20898

To be eligible for the Certificate II in Process Manufacturing (Rubber - Tyre Retreading), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, there are 2 compulsory units that must be completed (listed in the table below). Of the other 5 units, up to 2 units may be selected from other Training Package(s) from a certificate II qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate II requires:

> Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is:
> - $ *a clearly defined range of contexts in which the choice of actions required is usually clear*
> - $ *limited complexity in the range of options to be applied*.
>
> Performance of a prescribed range of functions involving:
> - $ *known routines and procedures*
> - $ *some accountability for the quality of outcomes*.
>
> Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others through members of a group or team.

Certificate II in Process Manufacturing (Rubber - Tyre Retreading)	
COMPULSORY UNITS	
Apply emergency/incident procedures	PMB OHS04 A
Use materials and process knowledge to complete work operations (designated for the materials and process)	PMB PROD35 A
ELECTIVE UNITS - SELECT FIVE UNITS, AT LEAST THREE FROM THE LIST BELOW	
Assemble and organise materials	PMB PREP05 A
Chemically cut materials (designated for the materials and process)	PMB PROD38 A
Chemically join materials (designated for the materials and process)	PMB PROD37 A
Conduct compounding operations	PMB PROD52 A
Cut, shape and fabricate materials	PMB PROD45 A
Finish products for customer use	PMB FINISH01 A
Fit attachments to products	PMB FINISH02 A
Hand application of surface coatings	PMB PROD49 A
Hand decorate products (designated for the materials and process)	PMB FINISH05 A
Hand mix materials	PMB PROD46 A
Handle hazardous substances/dangerous goods	PMB OHS02 A
Inspect tyres for retreading	PMB PROD24 A
Load and unload goods	PMB HANDLE02 A
Maintain equipment	PMB MAINT02 A
Mechanically cut materials (designated for the materials and process)	PMB PROD40 A

Mechanically join materials (designated for the materials and process)	PMB PROD39 A
Monitor process operations (designated for the materials and process)	PMB PROD30 A
Operate an internal mill blender	PMB PROD53 A
Operate an open mill blender	PMB PROD54 A
Operate forklifts for load shifting	PMB HANDLE06 A
Operate hand held air/power equipment for production processes	PMB PROD36 A
Package goods	PMB FINISH04 A
Prepare materials to formulae	PMB PREP06 A
Prepare surfaces for coating	PMB PROD48 A
Process orders and dispatch products	PMB HANDLE01 A
Provide service to customers	PMB CUST01 A
Receive goods	PMB ORG05 A
Repair product imperfections (designated for the materials and process)	PMB FINISH03 A
Run high speed mixing equipment	PMB PROD55 A
Sample, inspect and test products to specifications (designated for the materials and process)	PMB PROD41 A
Store products	PMB HANDLE08 A
Transfer loads with slings	PMB HANDLE05 A
Use computers in the workplace	PMB COMP01 A
Use cranes and gantries to shift loads	PMB HANDLE07 A
Use information technology devices in the workplace	PMB COMP02 A
Up to 2 of these 5 elective units may be from other Training Package(s) from AQF II.	

Certificate III in Process Manufacturing (Rubber - Tyre Retreading) PMB30898

To be eligible for the Certificate III in Process Manufacturing (Rubber - Tyre Retreading), candidates must be assessed as competent in 7 units selected from the elective bank. There are no compulsory units. Candidates can select up to 2 units from other Training Package(s) from a certificate III qualification.

The Australian Qualifications Framework certificate III requires:

Breadth, depth and complexity of knowledge and competencies would cover:

- *selecting, adapting and transferring skills and knowledge to new environments*
- *providing technical advice and some leadership in resolution of specific problems*.

This would be applied across a range of roles in a variety of contexts with *some complexity in the extent and choice of options available.*

The qualification requires

- performance of a *defined range of skilled operations*, usually within a *range of broader related activities* involving *known routines, methods and procedures*
- *some discretion and judgement* in the selection of equipment, services or contingency measures
- known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.

Certificate III in Process Manufacturing (Rubber - Tyre Retreading)	
NO COMPULSORY UNITS - SELECT SEVEN UNITS, AT LEAST FIVE FROM THE LIST BELOW	
Apply first aid in the workplace	PMB OHS06 A
Change equipment dies or moulds (designated for the materials and process)	PMB PREP04 A
Conduct assessment in accordance with established assessment procedures	PMB ASSESS01 A
Conduct operations in confined or restricted spaces	PMB OHS03 A
Coordinate shift handover	PMB WKOPS05 A
Coordinate waste disposal	PMB WASTE02 A
Deliver training (category 1)	PMB TRAIN02 A
Develop assessment tools	PMB ASSESS03 A
Develop patterns	PMB PROD58 A
Extension unit B plan and review assessment	PMB ASSESS02 A
Implement and monitor occupational health & safety procedures	PMB OHS07 A
Induct new team members	PMB WKOPS03 A
Interpret and use workplace statistical information	PMB CALC02 A
Interpret job specifications	PMB WKOPS04 A
Interpret technical specifications	PMB PREP02 A
Isolate equipment faults	PMB MAINT03 A
Lay on tyre retreads	PMB PROD25 A
Monitor product quality standards	PMB PROD34 A
Organise occupational health & safety	PMB OHS08 A
Prepare for production (designated for the materials and process)	PMB PREP01 A
Prepare for training (category 1)	PMB TRAIN01 A
Review training (category 1)	PMB TRAIN03 A
Run calendering machines	PMB PROD07 A
Set up equipment for continuous operations (designated for the materials and process)	PMB PREP03 A
Shut down work area	PMB PROD43 A
Troubleshoot production faults and defects (designated for the materials and process)	PMB PROD42 A
Use precision measuring equipment	PMB CALC03 A
Use production stock and inventory systems	PMB ORG02 A
Use quality improvement systems and processes	PMB QUAL02 A
Up to 2 of these 7 units may be from other Training Package(s) from AQF III.	

Certificate II in Process Mfg (Compounding & Reclamation) PMB20998

To be eligible for the Certificate II in Process Manufacturing (Compounding and Reclamation), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, there are 2 compulsory units that must be completed (listed in the table below). Of the other 5 units, up to 2 units may be selected from other Training Package(s) from a certificate II qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate II requires:

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is:

- *a clearly defined range of contexts in which the choice of actions required is usually clear*
- *limited complexity in the range of options to be applied*.

Performance of a prescribed range of functions involving:

- *known routines and procedures*
- *some accountability for the quality of outcomes*.

Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others through members of a group or team.

Certificate II in Process Manufacturing (Compounding and Reclamation)	
COMPULSORY UNITS	
Apply emergency/incident procedures	PMB OHS04 A
Use materials and process knowledge to complete work operations (designated for the materials and process)	PMB PROD35 A
ELECTIVE UNITS - SELECT FIVE UNITS, AT LEAST THREE FROM THE LIST BELOW	
Assemble and organise materials	PMB PREP05 A
Chemically cut materials (designated for the materials and process)	PMB PROD38 A
Chemically join materials (designated for the materials and process)	PMB PROD37 A
Conduct compounding operations	PMB PROD52 A
Hand mix materials	PMB PROD46 A
Handle hazardous substances/dangerous goods	PMB OHS02 A
Load and unload goods	PMB HANDLE02 A
Maintain equipment	PMB MAINT02 A
Mechanically cut materials (designated for the materials and process)	PMB PROD40 A
Monitor process operations (designated for the materials and process)	PMB PROD30 A
Operate an internal mill blender	PMB PROD53 A
Operate an open mill blender	PMB PROD54 A
Operate forklifts for load shifting	PMB HANDLE06 A
Operate hand held air/power equipment for production processes	PMB PROD36 A
Package goods	PMB FINISH04 A
Prepare materials to formulae	PMB PREP06 A
Prepare surfaces for coating	PMB PROD48 A
Process orders and dispatch products	PMB HANDLE01 A
Provide service to customers	PMB CUST01 A
Receive goods	PMB ORG05 A
Run high speed mixing equipment	PMB PROD55 A
Sample, inspect and test products to specifications (designated for the materials and process)	PMB PROD41 A
Store products	PMB HANDLE08 A
Transfer loads with slings	PMB HANDLE05 A
Use computers in the workplace	PMB COMP01 A
Use cranes and gantries to shift loads	PMB HANDLE07 A
Use information technology devices in the workplace	PMB COMP02 A
Up to 2 of these 5 elective units may be from other Training Package(s) from AQF II.	

Certificate III in Process Mfg (Compounding and Reclamation) PMB30998

To be eligible for the Certificate III in Process Manufacturing (Compounding and Reclamation), candidates must be assessed as competent in 7 units selected from the elective bank. There are no compulsory units. Candidates can select up to 2 units from other Training Package(s) from a certificate III qualification.

The Australian Qualifications Framework certificate III requires:

Breadth, depth and complexity of knowledge and competencies would cover:

- *selecting, adapting and transferring skills and knowledge to new environments*
- *providing technical advice and some leadership in resolution of specific problems*.

This would be applied across a range of roles in a variety of contexts with *some complexity in the extent and choice of options available.*

The qualification requires

- performance of a *defined range of skilled operations*, usually within a *range of broader related activities* involving *known routines, methods and procedures*
- *some discretion and judgement* in the selection of equipment, services or contingency measures
- known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.

Certificate III in Process Manufacturing (Compounding and Reclamation)	
NO COMPULSORY UNITS - SELECT SEVEN UNITS, AT LEAST FIVE FROM THE LIST BELOW	
Apply first aid in the workplace	PMB OHS06 A
Change equipment dies or moulds (designated for the materials and process)	PMB PREP04 A
Conduct assessment in accordance with established assessment procedures	PMB ASSESS01 A
Coordinate shift handover	PMB WKOPS05 A
Coordinate waste disposal	PMB WASTE02 A
Deliver training (category 1)	PMB TRAIN02 A
Develop assessment tools	PMB ASSESS03 A
Develop patterns	PMB PROD58 A
Extension unit B plan and review assessment	PMB ASSESS02 A
Implement and monitor occupational health & safety procedures	PMB OHS07 A
Induct new team members	PMB WKOPS03 A
Interpret and use workplace statistical information	PMB CALC02 A
Interpret job specifications	PMB WKOPS04 A
Interpret technical specifications	PMB PREP02 A
Isolate equipment faults	PMB MAINT03 A
Lay on tyre retreads	PMB PROD25 A
Monitor product quality standards	PMB PROD34 A
Organise occupational health & safety	PMB OHS08 A
Prepare for training (category 1)	PMB TRAIN01 A
Review training (category 1)	PMB TRAIN03 A
Run calendering machines	PMB PROD07 A
Set up equipment for continuous operations (designated for the materials and process)	PMB PREP03 A
Shut down work area	PMB PROD43 A
Troubleshoot production faults and defects (designated for the materials and process)	PMB PROD42 A
Use precision measuring equipment	PMB CALC03 A
Use production stock and inventory systems	PMB ORG02 A
Use quality improvement systems and processes	PMB QUAL02 A
Up to 2 of these 7 units may be from other Training Package(s) from AQF III.	

Certificate II in Process Mfg (Plastics - Composite Materials) PMB21098

To be eligible for the Certificate II in Process Manufacturing (Plastics - Composite Materials), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, there are 4 compulsory units that must be completed (listed in the table below). Of the other 3 units, up to 2 units may be selected from other Training Package(s) from a certificate II qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate II requires:

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is:

- *a clearly defined range of contexts in which the choice of actions required is usually clear*
- *limited complexity in the range of options to be applied*.

Performance of a prescribed range of functions involving:

- *known routines and procedures*
- *some accountability for the quality of outcomes*.

Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others through members of a group or team.

Certificate II in Process Manufacturing (Plastics - Composite Materials)	
COMPULSORY UNITS	
Apply emergency/incident procedures	PMB OHS04 A
Use materials and process knowledge to complete work operations (designated for the materials and process)	PMB PROD35 A
Monitor process operations (designated for the materials and process)	PMB PROD30 A
Prepare surfaces for coating	PMB PROD48 A
ELECTIVE UNITS - SELECT THREE UNITS, AT LEAST ONE FROM THE LIST BELOW	
Assemble and organise materials	PMB PREP05 A
Chemically cut materials (designated for the materials and process)	PMB PROD38 A
Chemically join materials (designated for the materials and process)	PMB PROD37 A
Cut, shape and fabricate materials	PMB PROD45 A
Finish products for customer use	PMB FINISH01 A
Fit attachments to products	PMB FINISH02 A
Hand application of surface coatings	PMB PROD49 A
Hand decorate products (designated for the materials and process)	PMB FINISH05 A
Hand mix materials	PMB PROD46 A
Handle hazardous substances/dangerous goods	PMB OHS02 A
Load and unload goods	PMB HANDLE02 A
Maintain equipment	PMB MAINT02 A
Mechanically cut materials (designated for the materials and process)	PMB PROD40 A
Mechanically join materials (designated for the materials and process)	PMB PROD39 A
Monitor process operations (designated for the materials and process)	PMB PROD30 A
Operate forklifts for load shifting	PMB HANDLE06 A
Operate hand held air/power equipment for production processes	PMB PROD36 A
Package goods	PMB FINISH04 A
Prepare materials to formulae	PMB PREP06 A
Process orders and dispatch products	PMB HANDLE01 A
Provide service to customers	PMB CUST01 A
Receive goods	PMB ORG05 A
Repair product imperfections (designated for the materials and process)	PMB FINISH03 A
Sample, inspect and test products to specifications (designated for the materials and process)	PMB PROD41 A
Store products	PMB HANDLE08 A
Transfer loads with slings	PMB HANDLE05 A
Use computers in the workplace	PMB COMP01 A
Use cranes and gantries to shift loads	PMB HANDLE07 A
Use information technology devices in the workplace	PMB COMP02 A
Up to 2 of these 3 elective units may be from other Training Package(s) from AQF II.	

Certificate III in Process Mfg (Plastics - Composite Materials) PMB31098

To be eligible for the Certificate III in Process Manufacturing (Plastics - Composite Materials), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, the 1 compulsory unit must be completed. Of the other 6 units, up to 2 units may be selected from other Training Package(s) from a certificate III qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate III requires:

Breadth, depth and complexity of knowledge and competencies would cover:

- *selecting, adapting and transferring skills and knowledge to new environments*
- *providing technical advice and some leadership in resolution of specific problems*.

This would be applied across a range of roles in a variety of contexts with *some complexity in the extent and choice of options available.*

The qualification requires

- performance of a *defined range of skilled operations*, usually within a *range of broader related activities* involving *known routines, methods and procedures*
- *some discretion and judgement* in the selection of equipment, services or contingency measures
- known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.

Certificate III in Process Manufacturing (Plastics - Composite Materials)	
COMPULSORY UNIT	
Construct moulds for composites	PMB PROD56 A
ELECTIVE UNITS - SELECT SIX UNITS, AT LEAST FOUR FROM THE LIST BELOW	
Apply first aid in the workplace	PMB OHS06 A
Change equipment dies or moulds (designated for the materials and process)	PMB PREP04 A
Conduct assessment in accordance with established assessment procedures	PMB ASSESS01 A
Conduct operations in confined or restricted spaces	PMB OHS03 A
Construct jigs and fixtures	PMB PROD57 A
Coordinate shift handover	PMB WKOPS05 A
Coordinate waste disposal	PMB WASTE02 A
Deliver training (category 1)	PMB TRAIN02 A
Develop assessment tools	PMB ASSESS03 A
Develop patterns	PMB PROD58 A
Extension unit B plan and review assessment	PMB ASSESS02 A
Implement and monitor occupational health & safety procedures	PMB OHS07 A
Induct new team members	PMB WKOPS03 A
Interpret and use workplace statistical information	PMB CALC02 A
Interpret job specifications	PMB WKOPS04 A
Interpret technical specifications	PMB PREP02 A
Isolate equipment faults	PMB MAINT03 A
Machine lay up of composites	PMB PROD22 A
Monitor product quality standards	PMB PROD34 A
Organise occupational health & safety	PMB OHS08 A
Prepare for production (designated for the materials and process)	PMB PREP01 A
Prepare for training (category 1)	PMB TRAIN01 A
Review training (category 1)	PMB TRAIN03 A
Shut down work area	PMB PROD43 A
Troubleshoot production faults and defects (designated for the materials and process)	PMB PROD42 A
Use precision measuring equipment	PMB CALC03 A
Use production stock and inventory systems	PMB ORG02 A
Use quality improvement systems and processes	PMB QUAL02 A
Up to 2 of these 6 elective units may be from other Training Package(s) from AQF III.	

Certificate II in Process Manufacturing (Rubber - Tyre Building) PMB21198

To be eligible for the Certificate II in Process Manufacturing (Rubber - Tyre Building), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, there are 2 compulsory units that must be completed (listed in the table below). Of the other 5 units, up to 2 units may be selected from other Training Package(s) from a certificate II qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate II requires:

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is:

- *a clearly defined range of contexts in which the choice of actions required is usually clear*
- *limited complexity in the range of options to be applied*.

Performance of a prescribed range of functions involving:

- *known routines and procedures*
- *some accountability for the quality of outcomes*.

Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others through members of a group or team.

Certificate II in Process Manufacturing (Rubber - Tyre Building)	
COMPULSORY UNITS	
Apply emergency/incident procedures	PMB OHS04 A
Use materials and process knowledge to complete work operations (designated for the materials and process)	PMB PROD35 A
ELECTIVE UNITS - SELECT FIVE UNITS, AT LEAST THREE FROM THE LIST BELOW	
Assemble and organise materials	PMB PREP05 A
Chemically cut materials (designated for the materials and process)	PMB PROD38 A
Chemically join materials (designated for the materials and process)	PMB PROD37 A
Conduct compounding operations	PMB PROD52 A
Cut, shape and fabricate materials	PMB PROD45 A
Finish products for customer use	PMB FINISH01 A
Fit attachments to products	PMB FINISH02 A
Hand application of surface coatings	PMB PROD49 A
Hand decorate products (designated for the materials and process)	PMB FINISH05 A
Hand mix materials	PMB PROD46 A
Handle hazardous substances/dangerous goods	PMB OHS02 A
Load and unload goods	PMB HANDLE02 A
Maintain equipment	PMB MAINT02 A
Mechanically cut materials (designated for the materials and process)	PMB PROD40 A
Mechanically join materials (designated for the materials and process)	PMB PROD39 A
Monitor process operations (designated for the materials and process)	PMB PROD30 A
Operate an internal mill blender	PMB PROD53 A
Operate an open mill blender	PMB PROD54 A
Operate forklifts for load shifting	PMB HANDLE06 A
Operate hand held air/power equipment for production processes	PMB PROD36 A
Package goods	PMB FINISH04 A
Prepare materials to formulae	PMB PREP06 A
Prepare surfaces for coating	PMB PROD48 A
Process orders and dispatch products	PMB HANDLE01 A
Provide service to customers	PMB CUST01 A
Receive goods	PMB ORG05 A
Repair product imperfections (designated for the materials and process)	PMB FINISH03 A
Run high speed mixing equipment	PMB PROD55 A
Sample, inspect and test products to specifications (designated for the materials and process)	PMB PROD41 A
Store products	PMB HANDLE08 A
Transfer loads with slings	PMB HANDLE05 A
Use computers in the workplace	PMB COMP01 A
Use cranes and gantries to shift loads	PMB HANDLE07 A
Use information technology devices in the workplace	PMB COMP02 A
Up to 2 of these 5 elective units may be from other Training Package(s) from AQF II.	

Certificate III in Process Manufacturing (Rubber - Tyre Building) PMB31198

To be eligible for the Certificate III in Process Manufacturing (Rubber - Tyre Building), candidates must be assessed as competent in 7 units selected from the elective bank. There are no compulsory units. Candidates can select up to 2 units from other Training Package(s) from a certificate III qualification.

The Australian Qualifications Framework certificate III requires:

Breadth, depth and complexity of knowledge and competencies would cover:

- *selecting, adapting and transferring skills and knowledge to new environments*
- *providing technical advice and some leadership in resolution of specific problems*.

This would be applied across a range of roles in a variety of contexts with *some complexity in the extent and choice of options available.*

The qualification requires

- performance of a *defined range of skilled operations*, usually within a *range of broader related activities* involving *known routines, methods and procedures*
- *some discretion and judgement* in the selection of equipment, services or contingency measures
- known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.

Certificate III in Process Manufacturing (Rubber - Tyre Building)	
NO COMPULSORY UNITS - SELECT SEVEN UNITS, AT LEAST FIVE FROM THE LIST BELOW	
Apply first aid in the workplace	PMB OHS06 A
Change equipment dies or moulds (designated for the materials and process)	PMB PREP04 A
Conduct assessment in accordance with established assessment procedures	PMB ASSESS01 A
Conduct operations in confined or restricted spaces	PMB OHS03 A
Coordinate shift handover	PMB WKOPS05 A
Coordinate waste disposal	PMB WASTE02 A
Deliver training (category 1)	PMB TRAIN02 A
Develop assessment tools	PMB ASSESS03 A
Develop patterns	PMB PROD58 A
Extension unit B plan and review assessment	PMB ASSESS02 A
Implement and monitor occupational health & safety procedures	PMB OHS07 A
Induct new team members	PMB WKOPS03 A
Interpret and use workplace statistical information	PMB CALC02 A
Interpret job specifications	PMB WKOPS04 A
Interpret technical specifications	PMB PREP02 A
Isolate equipment faults	PMB MAINT03 A
Monitor product quality standards	PMB PROD34 A
Organise occupational health & safety	PMB OHS08 A
Prepare for production (designated for the materials and process)	PMB PREP01 A
Prepare for training (category 1)	PMB TRAIN01 A
Review training (category 1)	PMB TRAIN03 A
Run calendering machines	PMB PROD07 A
Run extrusion line (designated for the materials and process)	PMB PROD13 A
Run tyre building machines	PMB PROD18 A
Set up equipment for continuous operations (designated for the materials and process)	PMB PREP03 A
Shut down work area	PMB PROD43 A
Troubleshoot production faults and defects (designated for the materials and process)	PMB PROD42 A
Use precision measuring equipment	PMB CALC03 A
Use production stock and inventory systems	PMB ORG02 A
Use quality improvement systems and processes	PMB QUAL02 A
Up to 2 of these 6 elective units may be from other Training Package(s) from AQF III.	

Certificate II in Process Manufacturing (Plastics - Fabrication) PMB21298

To be eligible for the Certificate II in Process Manufacturing (Plastics - Fabrication), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, there are 2 compulsory units that must be completed (listed in the table below). Of the other 5 units, up to 2 units may be selected from other Training Package(s) from a certificate II qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate II requires:

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is:

- *a clearly defined range of contexts in which the choice of actions required is usually clear*
- *limited complexity in the range of options to be applied*.

Performance of a prescribed range of functions involving:

- *known routines and procedures*
- *some accountability for the quality of outcomes*.

Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others through members of a group or team.

Certificate II in Process Manufacturing (Plastics - Fabrication)	
COMPULSORY UNITS	
Apply emergency/incident procedures	PMB OHS04 A
Use materials and process knowledge to complete work operations (designated for the materials and process)	PMB PROD35 A
ELECTIVE UNITS - SELECT FIVE UNITS, AT LEAST THREE FROM THE LIST BELOW	
Assemble and organise materials	PMB PREP05 A
Chemically cut materials (designated for the materials and process)	PMB PROD38 A
Chemically join materials (designated for the materials and process)	PMB PROD37 A
Conduct compounding operations	PMB PROD52 A
Cut, shape and fabricate materials	PMB PROD45 A
Finish products for customer use	PMB FINISH01 A
Fit attachments to products	PMB FINISH02 A
Hand application of surface coatings	PMB PROD49 A
Hand decorate products (designated for the materials and process)	PMB FINISH05 A
Hand mix materials	PMB PROD46 A
Handle hazardous substances/dangerous goods	PMB OHS02 A
Load and unload goods	PMB HANDLE02 A
Maintain equipment	PMB MAINT02 A
Mechanically cut materials (designated for the materials and process)	PMB PROD40 A
Mechanically join materials (designated for the materials and process)	PMB PROD39 A
Monitor process operations (designated for the materials and process)	PMB PREP01 A
Operate an open mill blender	PMB PROD54 A
Operate forklifts for load shifting	PMB HANDLE06 A
Operate hand held air/power equipment for production processes	PMB PROD36 A
Package goods	PMB FINISH04 A
Prepare materials to formulae	PMB PREP06 A
Prepare surfaces for coating	PMB PROD48 A
Process orders and dispatch products	PMB HANDLE01 A
Provide service to customers	PMB CUST01 A
Receive goods	PMB ORG05 A
Repair product imperfections (designated for the materials and process)	PMB FINISH03 A
Sample, inspect and test products to specifications (designated for the materials and process)	PMB PROD41 A
Store products	PMB HANDLE08 A
Transfer loads with slings	PMB HANDLE05 A
Use computers in the workplace	PMB COMP01 A
Use cranes and gantries to shift loads	PMB HANDLE07 A
Use information technology devices in the workplace	PMB COMP02 A
Up to 2 of these 5 elective units may be from other Training Package(s) from AQF II.	

Certificate III in Process Manufacturing (Plastics - Fabrication) PMB31298

To be eligible for the Certificate III in Process Manufacturing (Plastics - Fabrication), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, there are 3 compulsory units that must be completed (listed in the table below). Of the other 4 units, up to 2 units may be selected from other Training Package(s) from a certificate III qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate III requires:

Breadth, depth and complexity of knowledge and competencies would cover:

- *selecting, adapting and transferring skills and knowledge to new environments*
- *providing technical advice and some leadership in resolution of specific problems*.

This would be applied across a range of roles in a variety of contexts with *some complexity in the extent and choice of options available.*

The qualification requires

- performance of a *defined range of skilled operations*, usually within a *range of broader related activities* involving *known routines, methods and procedures*
- *some discretion and judgement* in the selection of equipment, services or contingency measures
- known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.

Certificate III in Process Manufacturing (Plastics - Fabrication)	
COMPULSORY UNITS	
Prepare for production (designated for the materials and process)	PMB PREP01 A
Construct jigs and fixtures	PMB PROD57 A
Interpret technical specifications	PMB PREP02 A
ELECTIVE UNITS - SELECT FOUR UNITS, AT LEAST TWO FROM THE LIST BELOW	
Apply first aid in the workplace	PMB OHS06 A
Change equipment dies or moulds (designated for the materials and process)	PMB PREP04 A
Conduct assessment in accordance with established assessment procedures	PMB ASSESS01 A
Coordinate shift handover	PMB WKOPS05 A
Coordinate waste disposal	PMB WASTE02 A
Deliver training (category 1)	PMB TRAIN02 A
Develop assessment tools	PMB ASSESS03 A
Develop patterns	PMB PROD58 A
Extension unit B plan and review assessment	PMB ASSESS02 A
Implement and monitor occupational health & safety procedures	PMB OHS07 A
Induct new team members	PMB WKOPS03 A
Interpret and use workplace statistical information	PMB CALC02 A
Interpret job specifications	PMB WKOPS04 A
Isolate equipment faults	PMB MAINT03 A
Monitor product quality standards	PMB PROD34 A
Organise occupational health & safety	PMB OHS08 A
Prepare for training (category 1)	PMB TRAIN01 A
Review training (category 1)	PMB TRAIN03 A
Run continuous thermoforming equipment	PMB PROD12 A
Run electroplating equipment	PMB PROD09 A
Run polystyrene shape moulding equipment	PMB PROD29 A
Run polyurethane foaming equipment	PMB PROD15 A
Set up and operate printing and decorating equipment for rigid products	PMB PROD17 A
Set up and operate sheet feed vacuum foaming equipment	PMB PROD28 A
Set up and operate thermal bending equipment	PMB PROD32 A
Shut down work area	PMB PROD43 A
Troubleshoot production faults and defects (designated for the materials and process)	PMB PROD42 A
Use precision measuring equipment	PMB CALC03 A
Use production stock and inventory systems	PMB ORG02 A
Use quality improvement systems and processes	PMB QUAL02 A
Up to 2 of these 7 units may be from other Training Package(s) from AQF III.	

Certificate II in Process Manufacturing (Plastics - Thermoforming) PMB21398

To be eligible for the Certificate II in Process Manufacturing (Plastics - Thermoforming), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, there are 2 compulsory units that must be completed (listed in the table below). Of the other 5 units, up to 2 units may be selected from other Training Package(s) from a certificate II qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate II requires:

> Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is:
> - $ *a clearly defined range of contexts in which the choice of actions required is usually clear*
> - $ *limited complexity in the range of options to be applied*.
>
> Performance of a prescribed range of functions involving:
> - $ *known routines and procedures*
> - $ *some accountability for the quality of outcomes*.
>
> Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others through members of a group or team.

Certificate II in Process Manufacturing (Plastics - Thermoforming)	
COMPULSORY UNITS	
Apply emergency/incident procedures	PMB OHS04 A
Use materials and process knowledge to complete work operations (designated for the materials and process)	PMB PROD35 A
ELECTIVE UNITS - SELECT FIVE UNITS, AT LEAST THREE FROM THE LIST BELOW	
Assemble and organise materials	PMB PREP05 A
Chemically cut materials (designated for the materials and process)	PMB PROD38 A
Chemically join materials (designated for the materials and process)	PMB PROD37 A
Conduct compounding operations	PMB PROD52 A
Cut, shape and fabricate materials	PMB PROD45 A
Finish products for customer use	PMB FINISH01 A
Fit attachments to products	PMB FINISH02 A
Hand application of surface coatings	PMB PROD49 A
Hand decorate products (designated for the materials and process)	PMB FINISH05 A
Hand lay up composites	PMB PROD47 A
Hand mix materials	PMB PROD46 A
Handle hazardous substances/dangerous goods	PMB OHS02 A
Load and unload goods	PMB HANDLE02 A
Maintain equipment	PMB MAINT02 A
Mechanically cut materials (designated for the materials and process)	PMB PROD40 A

Mechanically join materials (designated for the materials and process)	PMB PROD39 A
Monitor process operations (designated for the materials and process)	PMB PROD30 A
Operate forklifts for load shifting	PMB HANDLE06 A
Operate hand held air/power equipment for production processes	PMB PROD36 A
Package goods	PMB FINISH04 A
Prepare materials to formulae	PMB PREP06 A
Prepare surfaces for coating	PMB PROD48 A
Process orders and dispatch products	PMB HANDLE01 A
Provide service to customers	PMB CUST01 A
Receive goods	PMB ORG05 A
Repair product imperfections (designated for the materials and process)	PMB FINISH03 A
Run granulating equipment	PMB PROD59 A
Run high speed mixing equipment	PMB PROD55 A
Sample, inspect and test products to specifications (designated for the materials and process)	PMB PROD41 A
Store product on reels or spools	PMB HANDLE09 A
Store products	PMB HANDLE08 A
Transfer loads with slings	PMB HANDLE05 A
Use computers in the workplace	PMB COMP01 A
Use cranes and gantries to shift loads	PMB HANDLE07 A
Use information technology devices in the workplace	PMB COMP02 A
Up to 2 of these 5 elective units may be from other Training Package(s) from AQF II.	

Certificate III in Process Manufacturing (Plastics - Thermoforming) PMB31398

To be eligible for the Certificate III in Process Manufacturing (Plastics - Thermoforming), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, the 1 compulsory unit must be completed. Of the other 6 units, up to 2 units may be selected from other Training Package(s) from a certificate III qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate III requires:

Breadth, depth and complexity of knowledge and competencies would cover:

- *selecting, adapting and transferring skills and knowledge to new environments*
- *providing technical advice and some leadership in resolution of specific problems*.

This would be applied across a range of roles in a variety of contexts with *some complexity in the extent and choice of options available.*

The qualification requires

- performance of a *defined range of skilled operations*, usually within a *range of broader related activities* involving *known routines, methods and procedures*
- *some discretion and judgement* in the selection of equipment, services or contingency measures
- known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.

Certificate III in Process Manufacturing (Plastics - Thermoforming)	
COMPULSORY UNIT	
Run continuous thermoforming equipment	PMB PROD12 A
ELECTIVE UNITS - SELECT SIX UNITS, AT LEAST FOUR FROM THE LIST BELOW	
Apply first aid in the workplace	PMB OHS06 A
Change equipment dies or moulds (designated for the materials and process)	PMB PREP04 A
Conduct assessment in accordance with established assessment procedures	PMB ASSESS01 A
Construct jigs and fixtures	PMB PROD57 A
Construct moulds for composites	PMB PROD56 A
Coordinate shift handover	PMB WKOPS05 A
Coordinate waste disposal	PMB WASTE02 A
Deliver training (category 1)	PMB TRAIN02 A
Develop assessment tools	PMB ASSESS03 A
Develop patterns	PMB PROD58 A
Extension unit B plan and review assessment	PMB ASSESS02 A
Implement and monitor occupational health & safety procedures	PMB OHS07 A
Induct new team members	PMB WKOPS03 A
Interpret and use workplace statistical information	PMB CALC02 A
Interpret job specifications	PMB WKOPS04 A
Interpret technical specifications	PMB PREP02 A
Isolate equipment faults	PMB MAINT03 A
Machine lay up of composites	PMB PROD22 A
Monitor product quality standards	PMB PROD34 A
Organise occupational health & safety	PMB OHS08 A
Prepare for production (designated for the materials and process)	PMB PREP01 A
Prepare for training (category 1)	PMB TRAIN01 A
Review training (category 1)	PMB TRAIN03 A
Run compression moulding equipment	PMB PROD14 A
Run extrusion line (designated for the materials and process)	PMB PROD13 A
Run hot melt coating machines	PMB PROD26 A
Run polystyrene shape moulding equipment	PMB PROD29 A
Run transfer moulding equipment	PMB PROD08 A
Set up equipment for continuous operations (designated for the materials and process)	PMB PREP03 A
Shut down work area	PMB PROD43 A
Troubleshoot production faults and defects (designated for the materials and process)	PMB PROD42 A
Use precision measuring equipment	PMB CALC03 A
Use production stock and inventory systems	PMB ORG02 A
Use quality improvement systems and processes	PMB QUAL02 A
Up to 2 of these 6 elective units may be from other Training Package(s) from AQF III.	

Certificate II in Process Manufacturing (Cablemaking) PMB21498

To be eligible for the Certificate II in Process Manufacturing (Cablemaking), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, there are 2 compulsory units that must be completed (listed in the table below). Of the other 5 units, up to 2 units may be selected from other Training Package(s) from a certificate II qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate II requires:

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is:

- *a clearly defined range of contexts in which the choice of actions required is usually clear*
- *limited complexity in the range of options to be applied*.

Performance of a prescribed range of functions involving:

- *known routines and procedures*
- *some accountability for the quality of outcomes*.

Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others through members of a group or team.

Certificate II in Process Manufacturing (Cablemaking)	
COMPULSORY UNITS	
Apply emergency/incident procedures	PMB OHS04 A
Use materials and process knowledge to complete work operations (designated for the materials and process)	PMB PROD35 A
ELECTIVE UNITS - SELECT FIVE UNITS, AT LEAST THREE FROM THE LIST BELOW	
Assemble and organise materials	PMB PREP05 A
Chemically cut materials (designated for the materials and process)	PMB PROD38 A
Chemically join materials (designated for the materials and process)	PMB PROD37 A
Conduct compounding operations	PMB PROD52 A
Finish products for customer use	PMB FINISH01 A
Hand decorate products (designated for the materials and process)	PMB FINISH05 A
Hand mix materials	PMB PROD46 A
Handle hazardous substances/dangerous goods	PMB OHS02 A
Load and unload goods	PMB HANDLE02 A
Maintain equipment	PMB MAINT02 A
Mechanically cut materials (designated for the materials and process)	PMB PROD40 A
Mechanically join materials (designated for the materials and process)	PMB PROD39 A
Monitor process operations (designated for the materials and process)	PMB PROD30 A
Operate an internal mill blender	PMB PROD53 A
Operate an open mill blender	PMB PROD54 A
Operate forklifts for load shifting	PMB HANDLE06 A
Operate hand held air/power equipment for production processes	PMB PROD36 A
Package goods	PMB FINISH04 A
Prepare materials to formulae	PMB PREP06 A
Prepare surfaces for coating	PMB PROD48 A
Process orders and dispatch products	PMB HANDLE01 A
Provide service to customers	PMB CUST01 A
Receive goods	PMB ORG05 A
Repair product imperfections (designated for the materials and process)	PMB FINISH03 A
Run granulating equipment	PMB PROD59 A
Run high speed mixing equipment	PMB PROD55 A
Run wire winding equipment	PMB PROD04 A
Sample, inspect and test products to specifications (designated for the materials and process)	PMB PROD41 A
Store product on reels or spools	PMB HANDLE09 A
Store products	PMB HANDLE08 A
Transfer loads with slings	PMB HANDLE05 A
Use computers in the workplace	PMB COMP01 A
Use cranes and gantries to shift loads	PMB HANDLE07 A
Use information technology devices in the workplace	PMB COMP02 A
Up to 2 of these 5 elective units may be from other Training Package(s) from AQF II.	

Certificate III in Process Manufacturing (Cablemaking) PMB31498

To be eligible for the Certificate III in Process Manufacturing (Cablemaking), candidates must be assessed as competent in 7 units selected from the elective bank. There are no compulsory units. Candidates can select up to 2 units from other Training Package(s) from a certificate IV qualification.

The Australian Qualifications Framework certificate III requires:

Breadth, depth and complexity of knowledge and competencies would cover:

- *selecting, adapting and transferring skills and knowledge to new environments*
- *providing technical advice and some leadership in resolution of specific problems*.

This would be applied across a range of roles in a variety of contexts with *some complexity in the extent and choice of options available.*

The qualification requires

- performance of a *defined range of skilled operations*, usually within a *range of broader related activities* involving *known routines, methods and procedures*
- *some discretion and judgement* in the selection of equipment, services or contingency measures
- known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.

Certificate III in Process Manufacturing (Cablemaking)	
NO COMPULSORY UNITS - SELECT SEVEN UNITS, AT LEAST FIVE FROM THE LIST BELOW	
Apply first aid in the workplace	PMB OHS06 A
Change equipment dies or moulds (designated for the materials and process)	PMB PREP04 A
Conduct assessment in accordance with established assessment procedures	PMB ASSESS01 A
Conduct operations in confined or restricted spaces	PMB OHS03 A
Coordinate shift handover	PMB WKOPS05 A
Coordinate waste disposal	PMB WASTE02 A
Deliver training (category 1)	PMB TRAIN02 A
Develop assessment tools	PMB ASSESS03 A
Extension unit B plan and review assessment	PMB ASSESS02 A
Implement and monitor occupational health & safety procedures	PMB OHS07 A
Induct new team members	PMB WKOPS03 A
Interpret and use workplace statistical information	PMB CALC02 A
Interpret job specifications	PMB WKOPS04 A
Interpret technical specifications	PMB PREP02 A
Isolate equipment faults	PMB MAINT03 A
Monitor product quality standards	PMB PROD34 A
Organise occupational health & safety	PMB OHS08 A
Prepare for training (category 1)	PMB TRAIN01 A
Review training (category 1)	PMB TRAIN03 A
Run extrusion line (designated for the materials and process)	PMB PROD13 A
Run rotating plant and equipment	PMB PROD03 A
Run rotational moulding equipment	PMB PROD21 A
Set up and operate wire bunching and stranding equipment	PMB PROD02 A
Set up and operate wire drawing machines	PMB PROD01 A
Shut down work area	PMB PROD43 A
Troubleshoot production faults and defects (designated for the materials and process)	PMB PROD42 A
Use precision measuring equipment	PMB CALC03 A
Use production stock and inventory systems	PMB ORG02 A
Use quality improvement systems and processes	PMB QUAL02 A
Up to 2 of these 7 units may be from other Training Package(s) from AQF III.	

Certificate II in Process Manufacturing (Specialised Processes) PMB21598

This certificate applies to those workers involved in processes not accurately described or represented by the titles of other certificate qualifications in this Training Package.

To be eligible for the Certificate II in Process Manufacturing (Specialised Processes), candidates must be assessed as competent in 7 units selected from the following list. Of the 7 units, there are 2 compulsory units that must be completed (listed in the table below). Of the other 5 units, up to 2 units may be selected from other Training Package(s) from a certificate II qualification. The remaining units must be selected from the elective bank.

The Australian Qualifications Framework certificate II requires:

> Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is:
> - $ *a clearly defined range of contexts in which the choice of actions required is usually clear*
> - $ *limited complexity in the range of options to be applied*.
>
> Performance of a prescribed range of functions involving:
> - $ *known routines and procedures*
> - $ *some accountability for the quality of outcomes*.
>
> Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others through members of a group or team.

Certificate II in Process Manufacturing (Specialised Processes)	
COMPULSORY UNITS	
Apply emergency/incident procedures	PMB OHS04 A
Use materials and process knowledge to complete work operations (designated for the materials and process)	PMB PROD35 A
ELECTIVE UNITS - SELECT FIVE UNITS, AT LEAST TWO FROM THE LIST BELOW	
Assemble and organise materials	PMB PREP05 A
Chemically cut materials (designated for the materials and process)	PMB PROD38 A
Chemically join materials (designated for the materials and process)	PMB PROD37 A
Conduct compounding operations	PMB PROD52 A
Cut, shape and fabricate materials	PMB PROD45 A
Finish products for customer use	PMB FINISH01 A
Fit attachments to products	PMB FINISH02 A
Hand application of surface coatings	PMB PROD49 A
Hand decorate products (designated for the materials and process)	PMB FINISH05 A
Hand lay up composites	PMB PROD47 A
Hand mix materials	PMB PROD46 A
Handle hazardous substances/dangerous goods	PMB OHS02 A

Load and unload goods	PMB HANDLE02 A
Maintain equipment	PMB MAINT02 A
Mechanically cut materials (designated for the materials and process)	PMB PROD40 A
Mechanically join materials (designated for the materials and process)	PMB PROD39 A
Monitor process operations (designated for the materials and process)	PMB PROD30 A
Operate an internal mill blender	PMB PROD53 A
Operate an open mill blender	PMB PROD54 A
Operate forklifts for load shifting	PMB HANDLE06 A
Operate hand held air/power equipment for production processes	PMB PROD36 A
Package goods	PMB FINISH04 A
Prepare materials to formulae	PMB PREP06 A
Prepare surfaces for coating	PMB PROD48 A
Process orders and dispatch products	PMB HANDLE01 A
Provide service to customers	PMB CUST01 A
Receive goods	PMB ORG05 A
Repair product imperfections (designated for the materials and process)	PMB FINISH03 A
Run granulating equipment	PMB PROD59 A
Sample, inspect and test products to specifications (designated for the materials and process)	PMB PROD41 A
Store product on reels or spools	PMB HANDLE09 A
Store products	PMB HANDLE08 A
Transfer loads with slings	PMB HANDLE05 A
Use computers in the workplace	PMB COMP01 A
Use cranes and gantries to shift loads	PMB HANDLE07 A
Use information technology devices in the workplace	PMB COMP02 A
Up to 2 of these 5 elective units may be from other Training Package(s) from AQF II.	

Certificate III in Process Manufacturing (Specialised Processes) PMB31598

This certificate applies to those workers involved in processes not accurately described or represented by the titles of other certificate qualifications in this Training Package.

To be eligible for the Certificate III in Process Manufacturing (Specialised Processes), candidates must be assessed as competent in 7 units selected from the elective bank. There are no compulsory units. Candidates can select up to 2 units from other Training Package(s) from a certificate IV qualification.

The Australian Qualifications Framework certificate III requires:

Breadth, depth and complexity of knowledge and competencies would cover:
- $ *selecting, adapting and transferring skills and knowledge to new environments*
- $ *providing technical advice and some leadership in resolution of specific problems*.

This would be applied across a range of roles in a variety of contexts with *some complexity in the extent and choice of options available.*

The qualification requires
- $ performance of a *defined range of skilled operations*, usually within a *range of broader related activities* involving *known routines, methods and procedures*
- $ *some discretion and judgement* in the selection of equipment, services or contingency measures
- $ known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.

Certificate III in Process Manufacturing (Specialised Processes)	
NO COMPULSORY UNITS - SELECT SEVEN UNITS, AT LEAST FIVE FROM THE LIST BELOW	
Apply first aid in the workplace	PMB OHS06 A
Change equipment dies or moulds (designated for the materials and process)	PMB PREP04 A
Conduct assessment in accordance with established assessment procedures	PMB ASSESS01 A
Conduct operations in confined or restricted spaces	PMB OHS03 A
Construct jigs and fixtures	PMB PROD57 A
Construct moulds for composites	PMB PROD56 A
Coordinate shift handover	PMB WKOPS05 A
Coordinate waste disposal	PMB WASTE02 A
Deliver training (category 1)	PMB TRAIN02 A
Develop assessment tools	PMB ASSESS03 A
Develop patterns	PMB PROD58 A
Extension unit B plan and review assessment	PMB ASSESS02 A
	(Continued overleaf)
Certificate III in Process Manufacturing (Specialised Processes) (continued)	
Implement and monitor occupational health & safety procedures	PMB OHS07 A
Induct new team members	PMB WKOPS03 A
Interpret and use workplace statistical information	PMB CALC02 A
Interpret job specifications	PMB WKOPS04 A
Interpret technical specifications	PMB PREP02 A

Isolate equipment faults	PMB MAINT03 A
Monitor product quality standards	PMB PROD34 A
Organise occupational health & safety	PMB OHS08 A
Prepare for production (designated for the materials and process)	PMB PREP01 A
Prepare for training (category 1)	PMB TRAIN01 A
Review training (category 1)	PMB TRAIN03 A
Run calendering machines	PMB PROD07 A
Run cast sheet equipment	PMB PROD06 A
Run cold coating machines	PMB PROD27 A
Run compression moulding equipment	PMB PROD14 A
Run continuous thermoforming equipment	PMB PROD12 A
Run electroplating equipment	PMB PROD09 A
Run extrusion line (designated for the materials and process)	PMB PROD13 A
Run foam injection moulding equipment	PMB PROD20 A
Run hot melt coating machines	PMB PROD26 A
Run polystyrene shape moulding equipment	PMB PROD29 A
Run polyurethane foaming equipment	PMB PROD15 A
Run roller building equipment	PMB PROD19 A
Run rotating plant and equipment	PMB PROD03 A
Run rotational moulding equipment	PMB PROD21 A
Run transfer moulding equipment	PMB PROD08 A
Set up and operate film printing and decorating equipment	PMB PROD31 A
Set up and operate optical fibre colouring lines	PMB PROD05 A
Set up and operate printing and decorating equipment for rigid products	PMB PROD17 A
Set up and operate sheet feed vacuum foaming equipment	PMB PROD28 A
Set up and operate thermal bending equipment	PMB PROD32 A
Set up equipment for continuous operations (designated for the materials and process)	PMB PREP03 A
Shut down work area	PMB PROD43 A
Troubleshoot production faults and defects (designated for the materials and process)	PMB PROD42 A
Use precision measuring equipment	PMB CALC03 A
Use production stock and inventory systems	PMB ORG02 A
Use quality improvement systems and processes	PMB QUAL02 A
Up to 2 of these 7 elective units may be from other Training Package(s) from AQF III.	

AUSTRALIAN QUALIFICATIONS FRAMEWORK LEVEL DESCRIPTORS

Certificate I

Breadth, depth and complexity of knowledge and skills would prepare a person to perform a defined range of activities *most of which may be routine and predictable.*

Applications may include a variety of employment-related skills including:
- preparatory access and participation skills
- broad based induction skills
- and/or specific workplace skills.

They may also include participation in a team or work group.

Certificate II

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is:
- *a clearly defined range of contexts in which the choice of actions required is usually clear*
- *limited complexity in the range of options to be applied*.

Performance of a prescribed range of functions involving:
- *known routines and procedures*
- *some accountability for the quality of outcomes*.

Applications may include *some complex or non-routine activities* involving *individual responsibility or autonomy and/or collaboration with others* through members of a group or team.

Certificate III

Breadth, depth and complexity of knowledge and competencies would cover:
- *selecting, adapting and transferring skills and knowledge to new environments*
- *providing technical advice and some leadership in resolution of specific problems*.

This would be applied across a range of roles in a variety of contexts with *some complexity in the extent and choice of options available.*

The qualification requires
- performance of a *defined range of skilled operations*, usually within a *range of broader related activities* involving *known routines, methods and procedures*
- *some discretion and judgement* in the selection of equipment, services or contingency measures
- known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.

Certificate IV

Breadth, depth and complexity of knowledge and competencies would cover:
- $ *a broad range of varied activities or*
- $ *application in a wider variety of contexts most of which are complex and non-routine*.

Leadership and guidance are involved when organising activities of self and others as well as contributing to technical solutions of a non-routine or contingency nature.

Performance of a broad range of skilled applications including:
- $ requirements to evaluate and analyse current practices,
- $ development of new criteria and procedures for performing current practices and
- $ provision of some leadership and guidance to others in the application and planning of the skills.

Applications involve responsibility for, and limited organisation of, others.

And for information:

Diploma (AQF V)

Note: The diploma qualifications area is outside the scope of this project. As a result of the AQF alignment process, some units developed in the project may be seen to be in this area. The relevant descriptor is:

Breadth, depth and complexity would cover
- $ planning and initiation of alternative approaches to skills or knowledge applications across a broad range of technical and/or management requirements
- $ evaluation and coordination.

The self-directed application of knowledge and skills, with substantial depth in some areas where judgement is required, in
- $ planning and selecting appropriate equipment, services and techniques for self and others.

Applications involve
- $ participation in development of strategic initiatives, as well as
- $ personal responsibility and autonomy in performing complex technical operations or organising others.

This may include participation in teams including teams concerned with planning and evaluation functions. Group or team coordination may be involved. The degree of emphasis on breadth as against depth of knowledge and skills may vary between qualifications granted at this level.

Manufacturing Learning Australia

NATIONALLY RECOGNISED TRAINING

National Competency Standards

for the

Plastics, Rubber & Cablemaking Industries

Grouped under the fields of

Field	
Production organisation	
Production preparation	
Production	
Finish products	
Waste disposal	
Handling, storage and despatch	
Maintenance	C290
Workplace operations	
Quality	
Occupational health and safety	
Communications	C370
Calculations	
Customer service	
Computing technology	
Frontline management	C396
Training	
Assessment	

Training Package code: PMB98
November 1998

COMMON RANGE OF VARIABLES

This common range of variables applies across the full set of competency standards for the plastics, rubber and cablemaking industry grouping. It is designed to be read and used in conjunction with the relevant unit(s) of competency being assessed. It has been detached from each of the competency units that follow to keep the text for each unit manageable, and to reduce repetition.

Workplace context

- $ Work is generally performed within a team/group environment.
- $ Customers may be internal or external.
- $ Enterprises may comprise large, medium or small worksites.
- $ Work may be undertaken in various work environments within the plastics, rubber and cablemaking industry grouping.
- $ Operations may be conducted day or night.
- $ Manufacturing environment may include movement of equipment, goods, materials, partially processed products and vehicular traffic.
- $ Hazards may include:
  - chemical spills
  - dust/vapours
  - stationary and moving machinery, parts or components
  - hazardous or dangerous materials
  - noise, light, energy sources
  - electrical equipment
  - humidity, air temperature, radiant heat.
- $ Hazards may include contamination to raw and recycled materials, materials being processed and finished products.
- $ Consultative processes may involve:
  - other employees and supervisors
  - management
  - safety committees
  - union representatives
  - industrial relations, occupational health and safety specialists other professional or technical staff, contractors and maintenance personnel.

Common range of variables (continued)

Work activities require the application of

$ relevant workplace procedures including:
- hazard policies and procedures
- issue resolution procedures
- job procedures and work instructions
- guidelines relating to the safe use of machinery and equipment
- quality assurance procedures (where existing)
- sexual harassment and equal opportunity policies
- security procedures
- housekeeping processes
- waste, pollution and recycling management processes
- emergency procedures
- reporting of accidents and incidents within regulatory requirements and following workplace procedures.
$ relevant agreements, codes of practice and other legislative requirements
$ appropriate workplace language and communication technologies
$ identification of products, materials and work processes appropriate for the individual
$ interpretation of relevant safety information within requirements of duty of care.

Sources of information/documents may include

$ job specifications and procedures
$ machine or equipment instructions and data readouts
$ notes from previous work and structured training experiences
$ manufacturer=s specifications
$ workplace operating procedures and policies
$ supplier and/or client instructions
$ materials safety data sheets
$ communications technology equipment, oral, aural or signed communications
$ personal and work area work procedures and practices
$ conditions of service, legislation and industrial agreements including:
- workplace agreements and awards
- occupational health & safety procedures
$ applicable State, Territory and/or Commonwealth legislation and any related regulations concerning:
- occupational health & safety in terms of duties of employers, employees, suppliers and contractors
- workplace relations
- workers= compensation
- hazardous substances and dangerous goods
- environment protection
- equal opportunity, equal employment opportunity and affirmative action standards and certification requirements
- license, patent or copyright arrangements
- quality assurance procedures
- emergency procedures.

UNIT	Complete procurement operations PMB ORG01 A
FIELD	Production organisation
DESCRIPTION	This unit applies to employees required to order materials and equipment for production.

Element	Performance criteria

Identify requirements for product and production process	$ Product specifications are read and interpreted $ Lists of materials, quantities for proposed production and (any) tooling/equipment requirements are prepared and checked against specifications and workplace procedures $ (Any) specialised personnel requirements are identified
Identify suppliers and costs	$ Material suppliers are located and identified $ Availability of required materials is established $ (Where required) costs are recorded for materials tools/equipment and any expertise sourced from outside work area
Check costings	$ Alternative suppliers are contacted (where appropriate) to check costings $ Actual costs are compared to predicted costs $ Recommendations regarding preferred supplier communicated to appropriate personnel following workplace procedures $ Permission to order goods/materials/equipment obtained if required
Order materials and equipment	$ Orders are placed and delivery times arranged $ Requirements for storage of production supplies are predicted and arranged

UNIT	Complete procurement operations
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ While operating under general guidance in relation to progress and output of work there is a requirement that discretion and judgement is exercised in relation to the work of self and others within the production environment. $ Work involves the identification of required supplies and the ordering of goods, materials or equipment to support the production process.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify potential suppliers
	$ calculate materials and other resource requirements and costs$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ interpretation of technical specifications
	$ budgetary constraints on production
	$ production workflow and processes
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures

	$ planning own work including predicting consequences and identifying improvements
Resource implications	Suppliers and technical specifications for production requirements
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Obtains appropriate resources within scope of authority maximising cost benefits to the production process Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology

UNIT	Use production stock and inventory systems PMB ORG02 A
FIELD	Production organisation
DESCRIPTION	This unit applies to employees required to access stock and inventory systems for production processes or stock control purposes.

Element	Performance criteria
Identify inventory and stock control systems in use in the workplace	$ Workplace inventory and stock control equipment, software and systems are identified $ Reasons for common data base approach to inventory records and documentation in the workplace are explained $ Procedures for identification and reporting of discrepancies or variances are identified $ Inventory data is interpreted $ Data is accurately entered and extracted from the inventory/records system using appropriate workplace procedures
Conduct stock rotation activities	$ Stock levels are counted against appropriate documentation $ Stock levels are recorded and reported $ Stock levels are maintained to meet production requirements

	$ Stocks are replenished, adjusted or rotated following workplace procedures $ Stock reordering is conducted in accordance with workplace policies and procedures $ Routine and non-routine problems with products or storage systems are reported following workplace procedures
Interpret and fill production materials request	$ Order request documentation is interpreted $ Product(s) listed in the order are noted and workplace location(s) are identified $ Process and product knowledge is used to plan sequence for filling work order $ Appropriate materials handling equipment is selected within required occupational health and safety regulations and timeframes $ Required schedules for order movement and despatch or storage are identified $ Products are sorted, assembled and consolidated in the appropriate storage areas $ Stock re-ordering processes are activated when appropriate $ Work is checked in accordance with company procedures
Coordinate cyclical stock counts and report discrepancies or variances	$ Process for cyclical stock count in work area is planned and work allocated to team members $ Clear directions on tasks to be performed are given $ Stock is counted against inventory information $ Stock, equipment or consumables in incorrect locations are returned to appropriate areas $ Discrepancies in type, number, and quality of stock are accurately recorded and documented $ Workplace documentation is completed
Produce reports on record keeping and inventory functions	$ Types of reports to be produced from inventory records systems are identified $ Reports are produced to meet workplace requirements

UNIT	Use production stock and inventory systems
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ The maintenance of stock to meet production orders includes reporting on existing stock levels, maintaining stock levels and currency of materials $ Inventory records systems may be computerised or paper based $ While operating under general guidance in relation to progress and output of work there is a requirement that discretion and judgement is exercised in relation to the work of self and others within the production environment. $ Sources of information/documents may include: - merchandise transfers - stock requisitions - bar codes - Electronic Data Exchange - RF information systems.
Evidence guide	
Critical aspects of	Assessment must confirm appropriate knowledge and skills to:

evidence to be considered	$ use inventory systems to locate and organise stock for production
	$ identify component sections of inventory and stock records systems and use the information to complete work orders
	$ applications of different inventory and stock records systems within the workplace and in the related suppliers and customer systems
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ focus of inventory operations in terms of workplace production systems and supplier/customer relationships
	$ applications of different types of inventory and stock systems
	$ production workflow and materials demands
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to orders, stock control systems, supplier and customer information and stocks to be managed
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Consistently uses knowledge of the inventory system, materials and processes to organise stock and to monitor stock levels and movement Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	2

UNIT	Organise production processes PMB ORG 03 A
FIELD	Production organisation
DESCRIPTION	This unit applies to employees required to apply technical skills, knowledge of production techniques and communication with others to the organisation of the production of mass produced and customised fittings, equipment and assemblies.

Element	Performance criteria
Collect information	$ Job specifications are read and key requirements are noted $ Steps and stages in the process are identified $ Clarification of specifications is sought where required
Analyse job requirements	$ Equipment capabilities are assessed in terms of meeting job specifications $ Production run time and quantities are compared with plant capabilities
Propose requirements for production	$ Reports are made to appropriate personnel $ Proposals for modifications/adaptation of equipment are made $ Requirements for tooling/dies are listed $ Raw material requirements are listed and communicated to appropriate personnel
Plan and prepare for production processes	$ Work plans noting timeframes and milestones are developed from: - product drawings - specifications for products and materials - equipment instructions and capacity - customer timeframe requirements - relevant standards, inspection requirements and design rules - personnel availability and skills profile - standard operating or quality procedures $ Production operations are planned ensuring availability of: - personnel - equipment - safe working spaces - consumables to meet customer timeframe and plan milestones
Conduct trials to monitor equipment operation	$ Equipment is set up to make appropriate use of guards, warning devices and safety features, and standard operating procedures are modified to suit the production $ Equipment operations are monitored to ensure variations or inconsistencies in output are identified, reported and rectified $ Equipment configuration or component modifications are made to meet product quality requirement $ Required adjustments to equipment controls and settings are made to ensure consistency and continuity in production $ Equipment maintenance, set up and close down procedures are planned and documented
Conduct trials to monitor consumables and production materials	$ Consumables and production materials are monitored for capacity to meet the requirements of the end product, cost and time parameters, product life cycle, health and safety requirements and customer or market $ Preparation procedures for consumables and production materials are documented

	$ Materials ordering, storage movement and waste disposal needs are documented
Monitor product finish	$ Product finish is checked for conformity to design specification $ Any non-conformity in product finish is noted and possible causes investigated and documented
Evaluate production process	$ Product finish is compared with competitive products, market information and improvements recommended to inform the planning process $ Cost reports (including time, maintenance, plant depreciation, on costs and profit margins) are prepared $ All procedures for the process are checked for conformity with trial outcomes $ Work procedures are authorised by appropriate personnel for implementation $ Recommendations for variations to design specifications are made to appropriate personnel

UNIT	Organise production processes

Range of variables

This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity.

The common range of variables should be used to assist in planning assessment and training activities.

Job role context	$ Work involves the analysis of job specifications and the impact on plant machinery, raw materials and personnel

Evidence guide

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ analyse job requirements and materials and equipment capabilities
	$ inspect and test products
	$ set up equipment and monitor trial production runs
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task
	$ inspect and test products.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ machine processes
	$ raw material capabilities
	$ quality procedures, inspection and testing requirements
	$ production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Job specifications, production capability statements/specifications
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Consistently identifies and sets up production processes within workplace procedures Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	3	3	3

UNIT	Prepare production materials estimates PMB ORG04 A
FIELD	Production organisation
DESCRIPTION	This unit applies to employees required to prepare cost estimates for particular product specifications.

Element	Performance criteria
Identify materials requirements	$ Drawings and specifications for materials are read and interpreted $ Sources of product supply are identified $ Normal quantity supply and matching storage facilities and equipment are identified $ Material safety data sheets or other supplier safety information is read and any relevant engineering controls or personal protection equipment are identified, any additional resources required for safe workplace handling and storage of the materials is documented and reported $ Procedures to deal with (any) fire or explosion risk, spills or injury are identified and recorded
Monitor consumables and production materials	$ Consumables and production materials are checked for conformity to design specification and capacity to meet the requirements of the end product, cost and time parameters, product life cycle, health and safety requirements and customer or market $ Any non-conformity in materials is noted and possible causes investigated and documented including any variations which may need to be made to the production process or materials used $ Materials and consumables are compared with competitive products, market information and recommendations are made on preferred options $ Preparation procedures for consumables and production materials are identified and checked for required additives, consumables, other materials or equipment requirement $ Materials ordering, storage, safe movement and waste disposal needs are identified
Document materials estimates	$ All procedures for the estimates process is checked for conformity with workplace procedures $ Cost reports (including time, maintenance) are prepared $ Estimates are authorised by appropriate personnel for implementation $ Recommendations for variations to materials specifications are made to appropriate personnel

UNIT	Prepare production materials estimates
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the documentation of production estimates ensuring the selection of appropriate materials and consumables for production, while maintaining personal safety and the safety of others $ Decisions are made within the context of application of process and materials knowledge to developing the estimates and extensive knowledge of the required production output and product quality standards $ Work is governed by established workplace procedures and extent of authority for work activities are defined
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify appropriate materials and consumables to match production and product quality standards
	$ calculate materials and other resource requirements and costs
	$ identify process requirements in terms of materials and specialist equipment
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ identify safety precautions including personal protection equipment and engineering controls appropriate to the production tasks and materials requirements.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ interpretation of technical specifications
	$ budgetary constraints on production
	$ materials and process characteristics and special requirements
	$ evaluation strategies and decision making
	$ production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to suppliers information, including data sheets and instructions, product drawings and specifications and information on production machinery and processes
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Consistently identifies appropriate quantities of materials and maintains knowledge of relevant materials choices and cost/quality/availability parameters Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	2	3	2	3	2	2

UNIT	Receive goods PMB ORG 05 A
FIELD	Production organisation
DESCRIPTION	This unit applies to employees who are required to receive and store raw materials and goods for production processes

Element	Performance criteria
Identify workplace procedures and documentation requirements for the receipt of goods	$ Workplace procedures for receipt of goods are identified $ Purpose of documents associated with the receipt of goods is interpreted $ Workplace documentation for the receipt of goods and reporting of damage is identified
Check and inspect goods on arrival and complete workplace documentation	$ Procedures for checking of goods in comparison with orders or manifests are identified and followed $ Discrepancies and/or damaged goods are reported $ Non-conforming goods are appropriately documented and dispatched or stored in accordance with workplace procedures
Unload, unpack and store stock	$ Appropriate manual handling techniques and equipment are identified $ Safe work procedures are used when unloading, unpacking and storing stock $ Advice on appropriate storage locations and requirements for particular products is sought $ Goods are unloaded and unpacked $ Assistance from others is sought when required to maintain safe and effective work $ Directions are followed to store stock in appropriate areas

UNIT	Receive goods
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ The extent of authority for this work is covered by standard operating procedures and workplace precedence. $ Efficient, safe handling and storage of product and loss minimisation are important work requirements.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ follow procedures for receival of goods and safe storage/co-storage of materials
	$ reconcile orders and invoices
	$ check stock and report on faulty product or discrepancies in orders
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. including the appropriate unit from the computing technology field.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ impact of job on production process and enterprise effectiveness
	$ legislative requirements for safe handling and storage of product
	$ production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Goods, receival procedure, storage area
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Workplace procedures for order checking and safe handling and storage of product are followed Discrepancies in stock are noted and promptly reported Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas &	Solve problems	Use technology

information				techniques		
2	1	1	1	1	2	2

UNIT	Prepare for production PMB PREP01 A
FIELD	Production preparation
DESCRIPTION	This unit applies to employees required to apply technical expertise, work planning and problem solving to prepare for non-continuous production. *This unit will be designated for the relevant materials and process.*

Element	Performance criteria
Select equipment and materials	$ Equipment and materials are identified from job specification $ Equipment and materials are checked for conformity to specification $ Any variances in materials (within materials supplier specifications) are noted which may require variation in production process settings $ Requirements for special tooling and set up are identified $ Conformity deficiencies are noted and reported to appropriate personnel $ Production objectives and timelines are identified $ Product specifications are clarified $ Work process plan is drafted, noting key quality characteristics, check points and activities where other personnel will be involved
Prepare tools equipment and materials	$ Tools and equipment are located within workplace ensuring: - safety and operational checks are performed - equipment is appropriate for purpose $ Materials specifications are obtained and material at site are confirmed for commencement of production in accordance with established procedures $ Materials are checked for preparation to achieve product specification
Set up and check production process	$ Procedures for set up are followed in accordance with workplace procedures, customer requirements and specifications $ Machine control parameters are set in accordance with specifications $ Work process plan and set up are checked for conformity with identified workplace procedures and customer requirements $ Any required adjustments to own work plan are made $ Appropriate clearances for production to commence are obtained $ Equipment is checked for function and provisional control settings are made $ Performance of equipment and materials is checked $ Adjustments are made to process settings and materials to ensure production outcomes are within quality specifications $ Records of required adjustments within specification ranges are made and stored in accordance with workplace procedures

UNIT	Prepare for production
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Work involves the organisation of materials and equipment for production, including setting machine adjustments and conducting trial production.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select, set up and adjust equipment
	$ arrange materials supply
	$ inspect results of checks for equipment and materials performance
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ operational capabilities of equipment
	$ prediction of materials behaviour
	$ machine adjustment parameters
	$ production workflow in relation to focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Production materials, equipment and job specifications
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Adjusts equipment to produce required results Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies						
Collect, analyse &	Commu-nicate ideas &	Plan & organise	Work with others & in	Use mathemati-cal	Solve problems	Use technology

organise information	information	activities	teams	ideas & techniques		
3	3	3	2	2	3	3

UNIT	Interpret technical specifications PMB PREP02 A
FIELD	Production preparation
DESCRIPTION	This unit applies to employees required to interpret technical specifications and drawings and their impact on production capabilities.

Element	Performance criteria
Collect information	$ Technical specifications and drawings are read and key requirements noted $ Clarifications of specifications are sought where required $ Stages and steps in production process are identified and matched to specification requirements
Analyse job requirements	$ Process flow chart is produced and where required, drawings are produced $ Equipment capabilities are analysed and compared with specifications $ Any required specialist equipment or modifications to existing equipment are identified $ Requirements for dies and/or moulds are identified
Report findings	$ Appropriate personnel are notified of findings and requirements in line with workplace procedures $ Notification of impending job is provided to appropriate personnel

UNIT	Interpret technical specifications
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	This job relates to personnel required to interpret technical specifications and drawings, and identify the impact on and capabilities of production equipment and personnel.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ interpret the specification
	$ identify required equipment, modifications and other requirements
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Technical specifications, production equipment

Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Consistently identifies production requirements to meet the needs of the specifications Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	3	3	3

UNIT	Set up equipment for continuous operations PMB PREP03 A
FIELD	Production preparation
DESCRIPTION	This unit applies to employees required to set up a continuous production run. *This unit will be designated for the materials and process.*

Element	Performance criteria
Identify production requirements	$ Specifications and standard operating procedures for production run and equipment are read $ Materials required are identified $ Production control requirements for production and warm up time, pressure(s), speed(s), temperature(s) and product specifications are noted $ Key stages in the process for quality checks are noted $ Equipment and components required are identified $ Assembly requirements for items of production and downstream equipment or specialised componentry are checked to ensure efficient work flow will occur
Set up equipment	$ Work area is checked to ensure adequate space for the process $ Equipment and components are placed in required configuration $ Guards, warning devices and cut-offs are installed as required $ All connecting components and services are checked for integrity and effectiveness $ Dies/moulds/jigs (as required) are checked for suitability for production requirements $ Standard operating procedures and quality procedures are installed in appropriate work stations $ Work area is checked for operator ergonomic efficiency, access and egress requirements
Explain process to operators	$ Particular requirements for machine adjustments, materials characteristics, quality specifications and key production stages are explained to the operator $ Standard operating procedures are explained and any particular occupational health and safety issues are identified $ Appropriate contingency strategies for: - process faults - quality - occupational health and safety issues - materials supply or quality - machine malfunctions are identified and explained $ Operators are encouraged to ask questions and clarify procedures
Produce first-off production sample(s)	$ Process is started following standard operating procedures $ Product quality through process is observed and compared to standards $ Machine setting ranges are compared to documented requirements $ Observations of the process outcomes are used to fine tune the settings and other production variables $ Final product is checked for the required standards $ Standard operating procedures are compared with actual production run and variances are noted
Fine tune the process	$ Information collected during trial is used to modify workplace documentation including standard operating procedures, machine settings and process instructions $ Where variations are outside of quality or specification range, appropriate advice and permission are obtained

	$ Operators are advised of variations to process and (any) revised procedures are appropriately authorised and posted
UNIT	Set up equipment for continuous operations
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	This job involves the set up, adjustment and first run production sample fine tuning for production equipment.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select and set up equipment
	$ organise work area
	$ instruct production personnel
	$ identify equipment and components by name, operating principles and function
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role., including the appropriate production organisation units, and/or production preparation units such as *Interpret technical specifications* and the relevant unit associated with product and process knowledge.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ identify impact of mechanical, hydraulic, pneumatic and electrical/electronic principles of the production process$ particular requirements of products, materials, equipment and production process
	$ likely faults and remedies
	$ production workflow and the relationships with equipment, materials and product storage areas and workplace rosters and order systems
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Production requirements, materials and equipment
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Selection of appropriate equipment and settings Provision of accurate alterations to operating procedures Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	3	3	3

UNIT	Change equipment dies, cores or moulds PMB PREP04 A
FIELD	Production preparation
DESCRIPTION	This unit applies to personnel required to remove and refit dies and moulds for production. *This unit will be designated for the materials and process.*

Element	Performance criteria
Prepare to change dies or moulds	$ Relevant personnel are notified of interruptions to production and related process/equipment/product changes $ The process for closing down machinery is planned and conducted $ Isolating locks are activated, power supplies are disconnected and relevant signage is posted $ Relevant dies or moulds are selected to match product/process specifications $ Appropriate equipment for removing and relocating dies or moulds is identified and checked for safe, effective operation $ Last off samples for die reports are taken where required
Change dies or moulds	$ Removal process is planned and conducted to ensure no damage to self, equipment or others $ Existing mould or die is removed, cleaned and stored following workplace procedures $ A replacement die or mould is fitted ensuring that locating devices and marks are matched, securing devices are installed and tightened to specification $ Dies, moulds and immediate machine ares are cleaned of all contaminants and (any) appropriate corrosion protection is applied
Test fitting of die or mould	$ Production trial is conducted to check operation of die/mould against product quality specifications $ Machine setting ranges are compared to documented requirements $ Observations of the process outcomes are used to fine tune the settings and other production variables $ Final product is checked for the required standards $ Standard operating procedures are compared with actual production run and variances are noted $ Workplace documentation is completed and reports made to appropriate personnel
UNIT	Change equipment dies, cores or moulds

Range of variables

This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity.

The common range of variables should be used to assist in planning assessment and training activities.

Job role context	Work involves the selection and fitting of dies and moulds to production equipment.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select, install and check the performance of die and moulds
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. including relevant handling, storage and despatch and production equipment or production preparation units.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ fitting, alignment and adjustment of dies and moulds and related production equipment controls
	$ production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Production equipment, dies and moulds to be changed
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows correct selection, fitting, testing and adjustment of dies and moulds Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	3	3	3

UNIT	Assemble and organise materials PMB PREP05 A
FIELD	Production preparation
DESCRIPTION	This unit applies to employees required to assemble and prepare materials for production.

Element	Performance criteria
Identify required materials and equipment	$ Product specifications are read and interpreted $ Materials including additives and catalysts are identified and listed $ Manual handling, relevant engineering controls for production processes and materials preparation equipment is identified and listed
Locate materials and equipment	$ Required machinery and materials are located and identified, marking off each item on the compiled list $ An appropriate holding area is identified and cleared
Assemble materials	$ Manual handling techniques appropriate for the materials are identified and used in accordance with relevant occupational health and safety requirements and codes of practice $ Materials are collected and organised to ensure storage compatibility
Store materials for production	$ Material storage requirements are identified $ Holding area conditions are noted and compared to material requirements $ Materials are organised and stored for production in accordance with production sequences and workplace requirements

UNIT	Assemble and organise materials
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	This work involves the identification, collection and safe storage of materials for production.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ locate and identify materials
	$ identify material toxicity, flammability, crushability, volatility and reactivity
	$ establish material storage requirements and sequences required for production
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task including following hazardous/dangerous goods and manual handling codes of practice.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with *Handle hazardous substances/dangerous goods* and/or handling, storage and dispatch units.
Required knowledge and	Display of the following knowledge and skills in terms of job role or function:

skills may include	$ quantity of material required for production
	$ production workflow sequences and materials demand
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Production specifications, materials and storage area(s) linked to preparation, production lines or finishing areas
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows the appropriate selection, assembly and storage of materials to match production requirements and schedules Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	2

UNIT	Prepare materials to formulae PMB PREP06 A
FIELD	Production preparation
DESCRIPTION	This unit applies to employees required to mix materials to formulae for production or product finishing.

Element	Performance criteria
Identify requirements to handle materials	$ Specifications for materials are read and interpreted and materials are identified $ Units of measurement and matching measuring equipment are identified $ Tolerances of measuring equipment are known and related to impact of over/under measurement of ingredients on production process and quality $ Material safety data sheets or other supplier safety information is read and any relevant engineering controls or personal protection equipment is identified $ Procedures to deal with (any) fire or explosion risk, spills or injury are identified $ Workplace procedures are read and used to plan work sequence
Prepare for assembly of ingredients	$ Equipment for measurement is zeroed and calibrated and/or appropriate scales for measurement are identified $ Required personal protection equipment and engineering controls are set up and fitted $ Equipment for dealing with emergencies is assembled $ Work area is checked for cleanliness $ Sources of potential contamination are identified and steps taken to minimise/eliminate contamination risk
Assemble ingredients	$ Ingredients are collected $ Appropriate workplace approved sequence for assembly of materials is followed $ Work is conducted following standard operating procedures and observing appropriate safety measures $ Workplace records are completed $ Unused ingredients are stored and equipment cleaned and stored

UNIT	Prepare materials to formulae
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	This work involves the selection and mixing of ingredients to formulae following established workplace guidelines.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ use measuring scales and equipment
	$ locate, interpret and apply relevant formulae and information
	$ maintain workplace records for materials used and mixes produced
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task, including safe storage of materials.

Interdependent assessment of	This unit of competency may be assessed in conjunction with other units that form part of a job role., especially *Handle hazardous substances/dangerous goods*.

units	

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ use of measuring systems, scales and calculating devices
	$ observation of storage and mixing requirements for materials to be mixed
	$ production workflow in relation to materials supply requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Formulae, ingredients, measuring and mixing equipment
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows accurate measurement and mixing of ingredients within workplace guidelines Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	3	2	2

UNIT	Set up and operate wire drawing machines PMB PROD01 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of wire drawing equipment.

Element	Performance criteria
Identify the purpose and process stages for operating wire drawing equipment	$ Purpose of the wire drawing process is identified $ Changes in materials are identified at each stage of the wire drawing process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of wire drawing equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Appropriate dies are selected (number and sizes) and are arranged in appropriate sequence $ Requirements for checking - materials inputs and outputs including lubricants - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Set up and check wire drawing equipment	$ Equipment information, required quality specifications and standard operating procedures are identified $ Wire drawing capstan is coated with paraffin $ Dies, capstans and gears are checked for compliance with workplace requirements $ Materials spool size(s) are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures $ New materials are threaded through equipment checking free operation through dies and secure fixing to reels or spools $ Wire drawing equipment settings and adjustments including gear selector (size and number), speed selector, capstan selection, line speed, die size and number and die

	positioning by size are checked for conformity to documented procedures for commencing the wire drawing process
Monitor wire drawing operations	$ Wire drawing operations are monitored noting product quality, production outputs, equipment operating amperages, speed and tensions, thickness and product integrity $ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Wire drawing process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Set up and operate wire drawing machines

Range of variables

This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity.

The common range of variables should be used to assist in planning assessment and training activities.

Job role context	$ This unit covers work involving the operation of wire drawing equipment, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards This unit applies to wire drawing and rod breakdown machinery $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined

Evidence guide

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of wire drawing equipment, machine components and the materials used
	$ identify the effects of worn or dirty dies, indentations in wire reel pack or cuts or damage to head, incorrect number of turns of wire around capstan
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of wire drawing machine speed, tension and wind off speed on product quality and production output
	$ explain circumstances in which dies must be polished and re-opened
	$ identify and describe own role and the roles of others involved directly in the wire drawing process
	$ explain the effect of unauthorised or emergency shut down of equipment on the wire drawing process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output

	$ locate, interpret and apply relevant information and maintain workplace records $ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task.
Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations and Mechanically join materials* in relation to cold welding of metals.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the wire drawing equipment operation and product development
	$ the impact that mechanical processes have on changing the state, form and condition of the materials
	$ the purpose of the annealing and wire threading process
	$ differentials in die wear based on materials hardness
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Wire drawing equipment, materials and operating procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting wire drawing in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Set up and operate wire bunching and stranding equipment PMB PROD02 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of wire bunching and stranding equipment.

Element	Performance criteria
Identify the purpose and process stages for wire bunching and stranding	$ Purpose of the wire bunching and stranding process is identified $ Changes in materials are identified at each stage of the wire bunching and stranding process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the components of the production process which impact on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements for wire bunching and stranding operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of wire bunching and stranding equipment and components are identified $ Materials are identified including base raw materials and additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Tension settings, die number and sizes and threading arrangements are checked for conformity with specifications for process $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments and housekeeping
Check wire bunching and stranding process set up	$ Equipment information, required quality specifications and standard operating procedures are identified $ Wire bunching and stranding settings and equipment adjustments are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor wire bunching and stranding operation	$ Wire bunching and stranding operations are monitored noting product quality, production outputs, equipment operating temperatures, amperages, tensions, thickness

	and product integrity $ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Wire bunching and stranding process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented
UNIT	Set up and operate wire bunching and stranding equipment

Range of variables

This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity.

The common range of variables should be used to assist in planning assessment and training activities.

Job role context	$ This unit covers work involving the operation of wire bunching and stranding equipment, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.

Evidence guide

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of wire bunching and stranding equipment, machine components and the materials used
	$ explain why multiple strand wires are used and the purpose of armouring and annealing the wires
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of wire bunching and stranding machine speed, time, tension, wind off speed on product quality and production output$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ identify and describe own role and the roles of others involved directly in the wire bunching and stranding process
	$ explain the effect of unauthorised or emergency shut down of equipment on the wire bunching and stranding process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations* and the relevant manual handling or crane operations units.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the wire bunching and stranding equipment operation and product development
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Wire bunching and stranding equipment, materials and operating procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting wire bunching and stranding in order to maintain production output and product qualityWork completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Run rotating plant and equipment PMB PROD03 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of rotating plant and equipment.

Element	Performance criteria
Identify the purpose and process stages for rotating plant and equipment	$ Purpose of the rotating plant and equipment is identified $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements for rotating plant and equipment operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of rotating plant and equipment and components are identified $ Materials are identified including wire sizes, materials type, taping or insulating materials and required lubricants $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - tensions and overlaps on tape lay up or tensions of armouring materials - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments and housekeeping
Check rotating plant and equipment process set up	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Rotating plant and equipment settings and adjustments including tensions, lay length, attachments to spools and treading path are checked for conformity to documented procedures $ Wire is attached to spools and appropriate taping materials are fitted $ Relevant guards, locks and signage are employed $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor rotating plant and equipment operation	$ Rotating plant and equipment operations are monitored noting product quality, production outputs, equipment operating conditions and product integrity $ Adjustments are made to remedy faults and non-conformity to production standards

	where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Rotating plant and equipment process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run rotating plant and equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of rotating plant and equipment, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of rotating plant and equipment, machine components and the materials used
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of rotating plant and equipment speed, pressure, time, temperature, tension, wind off speed on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the rotating plant and equipment operation
	$ decide if they (the operators) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the rotating plant and equipment
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the rotating plant and equipment operation and product development
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Rotating plant and equipment, materials and operating procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting rotating plant and equipment operations in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Run wire winding equipment PMB PROD04 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of wire winding equipment.

Element	Performance criteria
Identify the purpose and process stages for wire winding	$ Purpose of the wire winding process is identified $ Changes in materials are identified at each stage of the wire winding process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements for wire winding operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of wire winding equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments and housekeeping
Check wire winding process set up	$ Equipment information, required quality specifications and standard operating procedures are identified $ Wire winding settings and adjustments are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor wire winding operation	$ Wire winding operations are monitored noting product quality, production outputs, equipment operating temperatures, amperages, tensions, pressures, product integrity $ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed

	in accordance with workplace procedures
Respond to product quality improvement requests	$ Wire winding process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented
UNIT	Run wire winding equipment

Range of variables	
This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of wire winding equipment, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of wire winding equipment, machine components and the materials used
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of wire winding machine speed, pressure, tension and wind off speed on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the wire winding process
	$ decide if they (the operators) are able to rectify the fault or if assistance is required$ explain the effect of unauthorised or emergency shut down of equipment on the wire winding production process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the wire winding equipment operation and product development
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements

	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements.

Resource implications	Wire winding equipment, materials and operating procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting wire winding in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Set up and operate optical fibre colouring lines PMB PROD05 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of fibre colouring equipment.

Element	Performance criteria
Identify the purpose and process stages for fibre colouring	$ Purpose of the fibre colouring process is identified $ Changes in materials are identified at each stage of the fibre colouring process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements for fibre colouring operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of fibre colouring equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments and housekeeping
Set up and check fibre colouring process equipment	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Equipment is set up following workplace procedures and within recommended specifications $ Fibre colouring process settings and adjustments are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor fibre colouring operation	$ Fibre colouring operations are monitored noting product quality, production outputs, equipment operating temperatures, amperages, tensions, pressures, colour, and product integrity $ Adjustments are made to remedy faults and non-conformity to production standards where applicable

	$ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Fibre colouring process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Set up and operate optical fibre colouring lines
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of fibre colouring equipment, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of fibre colouring equipment, machine components and the materials used
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of fibre colouring machine speed, pressure, time, temperature, tension, wind off speed on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the fibre colouring process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the fibre colouring process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*
Required knowledge and	Display of the following knowledge and skills in terms of job role or function:

skills may include	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the fibre colouring equipment operation and product development
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Fibre colouring equipment, materials and operating procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting fibre colouring in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Run cast sheet equipment PMB PROD06 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of cast sheet equipment.

Element	Performance criteria
Identify the purpose and process stages for cast sheet production	$ Purpose of the cast sheet production process is identified $ Changes in materials are identified at each stage of the cast sheet production process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements for cast sheet production operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of cast sheet production equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments and housekeeping
Check cast sheet production process set up	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Cast sheet production settings and adjustments are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor cast sheet production operation	$ Cast sheet production operations are monitored noting product quality, production outputs, equipment operating temperatures, amperages, pressures, colour, thickness and product integrity $ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures

	$ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Cast sheet production process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run cast sheet equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of cast sheet production equipment, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of cast sheet production equipment, machine components and the materials used
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of cast sheet production machine pressure, time and temperature on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the cast sheet production process$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the cast sheet production process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials, read relevant safety information and apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*
Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function: $ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the cast sheet production equipment operation and product

	development
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements.

Resource implications	Cast sheet production equipment, materials and operating procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting cast sheet production in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	**Run calendering machines** **PMB PROD07 A**
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of calenders.

Element	Performance criteria
Identify the purpose and process stages for calendering	$ Purpose of the calendering production process is identified $ Changes in materials are identified at each stage of the calendering process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements for calendering operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of calendering equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments and housekeeping
Check calendering process set up	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Nip settings and temperature adjustments are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures

Monitor calender operation	$ Calendering operations are monitored noting product quality, production outputs, equipment nip settings, operating temperatures, amperages, time, tensions, pressures, colour, thickness feel and product integrity $ Pelt is stripped, cut and folded and fed through the rollers until required pigment blend, textures and consistency is achieved $ Temperatures are measured and monitored to ensure appropriate range is maintained $ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Calender process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented
UNIT	Run calendering machines
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of calendering machines monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of calendering equipment, machine components and guides$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of calendering machine nip settings, speed, pressure, time, temperature and tension on product quality and production output
	$ explain the potential effects of foreign objects in the nip area on the compounded materials
	$ identify and describe own role and the roles of others involved directly in the calendering process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the calendering production process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of

	supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products, remove materials from rollers read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the Calendering equipment operation and product development
	$ the impact that temperature differentials in the rollers, chemical reactions and mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Calendering equipment, appropriate raw materials, and product specifications
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting the calendering process in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology

2	1	2	2	2	2	2

UNIT	Run transfer moulding equipment PMB PROD08 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of transfer moulding equipment. *This unit will be designated for thermoset plastics or rubber*.

Element	Performance criteria
Identify the purpose and process stages for transfer moulding	$ Purpose of the transfer moulding process is identified $ Changes in materials are identified at each stage of the transfer moulding process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements for transfer moulding operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of transfer moulding equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Check transfer moulding process set up	$ Equipment information, required quality specifications and set up cards are read $ Transfer moulding equipment settings and adjustments for temperature, speed, timing and shot size are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations

	in accordance with workplace procedures
Monitor transfer moulding operation	$ Transfer moulding operations are monitored noting product quality, production outputs, equipment operating temperatures, speed, hunt or sprue break pressures, colour, thickness and product integrity $ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Transfer moulding process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented
UNIT	Run transfer moulding equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of transfer moulding equipment monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of transfer moulding equipment, machine components and the materials used
	$ describe the transfer moulding cycle
	$ identify and read transducers for hydraulic position and clamping force
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of transfer moulding machine speed, pressure, time and temperature, on product quality and production output$ identify and describe own role and the roles of others involved directly in the transfer moulding process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the transfer moulding production process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and

	apply safety precautions appropriate to the task.
Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the transfer moulding equipment operation and product development
	$ location and specifications for pressure gauge readings
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ the role of chillers in the injection process
	$ the necessity for and timing of purging operations
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements.

Resource implications	Transfer moulding equipment, raw materials and workplace documentation
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting transfer moulding in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Run electroplating equipment PMB PROD 09 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of electroplating equipment.

Element	Performance criteria
Identify the purpose and process stages for electroplating	$ Purpose of the electroplating process is identified $ Changes in materials are identified at each stage of the electroplating process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements for electroplating operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of electroplating equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Check electroplating process set up	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Electroplating settings and adjustments are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor electroplating operation	$ Electroplating operations are monitored noting product quality, production outputs, equipment operating temperatures, amperages, voltages and product integrity $ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed

	in accordance with workplace procedures
Respond to product quality improvement requests	$ Electroplating process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run electroplating equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of electroplating equipment, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of electroplating equipment, machine components and the materials used
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of electroplating machine speed, voltage, time and temperature, on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the electroplating process$decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the electroplating production process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the electroplating equipment operation and product development
	$ the impact that chemical reactions/mechanical processes have on changing the state,

	form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Electroplating equipment, consumables, material and operating procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting electroplating in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Run injection moulding equipment PMB PROD10 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of injection moulding equipment.

Element	Performance criteria
Identify the purpose and process stages for injection moulding	$ Purpose of the injection moulding process is identified $ Changes in materials are identified at each stage of the injection moulding process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of injection moulding equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Check injection moulding process setup	$ Equipment information, required quality specifications and set up cards are read $ Injection moulding equipment settings and adjustments are checked for conformity with documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures $ Date and/or batch markings, materials identifications (where applicable) are set up for the appropriate information
Monitor injection moulding operation	$ Injection moulding operations are monitored noting product quality, equipment operating temperatures, speed, hunt or sprue break pressures, colour, cushion specification, cycle time, output rate and product weight and product integrity $ Production controls, visual displays, data terminals are monitored for production variables and continuity of process is maintained

	$ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Injection moulding process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run injection moulding equipment

Range of variables

This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity.

The common range of variables should be used to assist in planning assessment and training activities.

Job role context	$ This unit covers work involving the operation of injection moulding equipment monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined

Evidence guide

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of injection moulding equipment and components
	$ describe the injection moulding cycle and explain why machine set up and warm up is important for effective processing of the materials$identify products, materials and materials characteristics
	$ identify short mouldings, sink marks, voids, burn marks, mica and splash marks, silver streaking, blistering, flow marks, poor surface finish, warping, windows, erratic cycles, poor colour dispersion, ejection damage, colour contamination, black spots
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of injection moulding machine speed, pressure, time and temperature, on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the injection moulding process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the injection moulding production process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality and identify factors which may influence product quality, production output and possible appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the relevant mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the injection moulding equipment operation and products
	$ reasons for checking temperature, speed, injection, full pressure, dwell and clamp open timing, follow up timing and shot size are checked for conformity to documented procedures
	$ location and specifications for pressure gauge readings
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ the role of chillers in the injection process
	$ the necessity for and timing of purging operations
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Injection moulding equipment, raw materials and workplace documentation
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting injection moulding in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Run blow moulding equipment PMB PROD11 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of blow moulding equipment.

Element	Performance criteria
Identify the purpose and process stages for blow moulding	$ Purpose of the blow moulding process is identified $ Changes in materials are identified at each stage of the blow moulding process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of blow moulding equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Check blow moulding process setup	$ Equipment information, required quality specifications and set up cards are read $ Blow moulding equipment settings and adjustments for shot size, parison control, die gap, temperature, screw speed, cycle speed, slow close setting (or cushion), timing and shot size are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures $ Date and/or batch markings, materials identifications (where applicable) are set up for the appropriate information
Monitor blow moulding operation	$ Blow moulding operations are monitored noting product quality, production outputs, equipment operating temperatures, amp/rpm relationships, speed,, colour, weight, thickness and product integrity $ Measures of concentration or dispersing rate of colour are compared to specification of dispensing rate

	$ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment cleanup, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Blow moulding process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run blow moulding equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of blow moulding equipment monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of blow moulding equipment, machine components and the materials used$ describe the blow moulding cycle
	$ identify short mouldings, voids, burn marks, flow marks, poor surface finish, warping, erratic cycles, poor colour dispersion, ejection damage, colour contamination, black spots
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of blow moulding machine speed, pressure, time and temperature, on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the blow moulding process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the blow moulding production process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process*

units	*knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the blow moulding equipment operation and product development
	$ location and specifications for pressure gauge readings
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ the role of chillers in the blow mould process
	$ the necessity for and timing of purging operations
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements.

Resource implications	Blow moulding equipment, raw materials and workplace documentation
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting blow moulding in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Run continuous thermoforming equipment PMB PROD12 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of thermoforming equipment for continuous materials. *This unit will be designated for air pressure or vacuum processes.*

Element	Performance criteria
Identify the purpose and process stages for thermoforming	$ Purpose of the continuous thermoforming production process is identified $ Changes in materials are identified at each stage of the thermoforming process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements for thermoforming operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of thermoforming equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials supply and output - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for materials input and final product quality, equipment operation within specifications, and required production output rate and number are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments and housekeeping
Check thermoforming process set up	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Thermoforming equipment settings and adjustments are checked for conformity to documented procedures $ Materials are checked for conformity including colour and thickness with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures $ Date and/or batch markings, materials identifications (where applicable) are set up for the appropriate information
Monitor thermoforming operation	$ Thermoforming operations are monitored noting product quality, production outputs, equipment operating temperatures, amperages, pressures and product integrity $ Adjustments are made to remedy faults and non-conformity to production standards

	where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Thermoforming process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run continuous thermoforming equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of thermoforming equipment, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of thermoforming equipment, machine components and the materials used
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of thermoforming machine speed, pressure, time, temperature on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the thermoforming process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the thermoforming production process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*
Required	Display of the following knowledge and skills in terms of job role or function:

knowledge and skills may include	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the thermoforming equipment operation and product development
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Thermoforming equipment, materials and job specifications
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting thermoforming in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Run extrusion line PMB PROD13 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of extrusion equipment. *This unit may be designated for sheet, profile and compounding extruders.*

Element	Performance criteria
Identify the purpose and process stages for extrusion	$ Purpose of the extrusion process is identified $ Changes in materials are identified at each stage of the extrusion process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of extrusion equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - thermocouples and barrel temperatures, cooling lines - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments and housekeeping
Check extrusion process set up	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Extrusion equipment settings and adjustments are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor extruder operation	$ Extruder operations are monitored noting screen based and readout data, product quality, production inputs including hopper levels, equipment operating temperatures, amperages, speed, pressures, cooling, cutting, colour, thickness size, weight and product integrity

	$ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Extruder process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run extrusion line
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of cross head and other extruder lines, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards $ Extrusion processes may be for production of completed product or part of a broader production process including extrusion of sheathing, insulation or other coating applications $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of extruder equipment, machine components and the materials used
	$ identify burn marks, flow marks, poor surface finish, poor colour dispersion, partially decomposed products, uneven colour, blistering, colour contamination, black spots
	$ describe changes to materials at the stages of production conducted by the employee
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the impact of extruder machine speed, pressure, time, temperature, wind off speed on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the extrusion process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the extrusion process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records

	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task.
Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit: *Apply materials and process knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the extruder equipment operation and product development
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials, the flow characteristics, thermal properties and granulation of the materials
	$ the role of additives in the process
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Extrusion line, materials and job specifications
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting extrusion in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Run compression moulding equipment PMB PROD 14 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of compression moulding equipment.

Element	Performance criteria
Identify the purpose and process stages for compression moulding	$ Purpose of the compression moulding process is identified $ Changes in materials are identified at each stage of the compression moulding process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify compression moulding work requirements	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of compression moulding equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Check compression moulding process setup	$ Equipment information, required quality specifications and setup cards are read $ Compression moulding equipment settings and adjustments for temperature, speed, timing and shot size are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures $ Date and/or batch markings, materials identifications (where applicable) are set up for the appropriate information
Monitor compression moulding operation	$ Compression moulding operations are monitored noting product quality, production outputs, equipment operating temperatures, speed, hunt or sprue break pressures, colour, thickness and product integrity $ Adjustments are made to remedy faults and non-conformity to production standards where applicable

	$ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Compression moulding process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run compression moulding equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of compression moulding equipment monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of compression moulding equipment, machine components and the materials used
	$ describe the compression moulding cycle
	$ identify and read transducers for hydraulic position and clamping force
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of compression moulding machine speed, pressure, time and temperature, on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the compression moulding process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the compression moulding production process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the compression moulding equipment operation and product development
	$ location and specifications for pressure gauge readings
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ the role of chillers in the injection process
	$ the necessity for and timing of purging operations
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements.

Resource implications	Compression moulding equipment, raw materials and workplace documentation
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environmentWork consistently shows evidence of following logical work sequences in conducting compression moulding in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Run polyurethane foaming equipment PMB PROD15 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of polyurethane foaming equipment.

Element	Performance criteria
Identify the purpose and process stages for polyurethane foaming	$ Purpose of the polyurethane foaming production process is identified $ Changes in materials are identified at each stage of the polyurethane foaming process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements for polyurethane foaming operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of polyurethane foaming equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments and housekeeping
Check polyurethane foaming process set up	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Polyurethane foaming settings and adjustments are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor polyurethane foaming operation	$ Polyurethane foaming operations are monitored noting product quality, production outputs, equipment operating temperatures, amperages, pressures, colour, thickness and product integrity $ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures

	$ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Polyurethane foaming process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run polyurethane foaming equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of polyurethane foaming equipment, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of polyurethane foaming equipment, machine components and the materials used
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of polyurethane foaming machine speed, pressure, time and temperature on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the polyurethane foaming process$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the polyurethane foaming process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*
Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function: $ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the polyurethane foaming operation and product development

	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Polyurethane foaming equipment, materials and operating procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting polyurethane foaming in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Run blown film line PMB PROD16 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of blown film equipment.

Element	Performance criteria
Identify the purpose and process stages for blown film	$ Purpose of the blown film production process is identified $ Changes in materials are identified at each stage of the blown film process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify blown film work requirements	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of blown film equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - start up conditions of equipment including extrusion die - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments and housekeeping
Check blown film process set up	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Extruder temperature, back pressures and currents, nip and winding speeds, nip roller settings, corona treatment settings, winder settings and die gap adjustments are checked for conformity to documented procedures $ Winders/Reelers are set up for slitting (LH or RH pattern) and trimming and counters are set $ Materials are checked for conformity with workplace operational requirements $ Empty cones of the appropriate size are selected and fitted $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor blown film operation	$ Blown film operations are monitored noting ambient temperatures, product quality, production outputs, equipment operating temperatures, amperages, tensions, film

	appearance, contamination, roll condition, edge appearance, telescoping pressures, colour, thickness and weight $ Web movement is observed ensuring even stretch and minimising movement of the web and/or creasing $ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Logs for production are completed following workplace procedures $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Blown film process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run blown film line
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of blown film equipment, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined $ Hazards may include fumes, high air velocities, high voltage corona treatment systems, hot surfaces, sharp knives, rotating nips/rollers and high towers.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of blown film equipment, machine components including chiller units and the materials used
	$ identify voids, gels, die and weld lines, flash, burn marks, poor surface finish, poor colour dispersion, partially decomposed products, uneven colour, blistering and contamination of colour
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of blown film machine speed, pressure, time, temperature, web tension, winding and take off speed on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the blown film process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the blown film production process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and

	appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials, read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles and where appropriate, computer controls which influence the blown film equipment operation and product development
	$ the relationship of web tension, winding and take off speed to the amperage drawn by the equipment
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures$ planning own work including predicting consequences and identifying improvements

Resource implications	Blown film equipment, appropriate materials and production specification
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in operating blown film equipment in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Set up & operate printing & decorating equipment for rigid products PMB PROD17 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of printing and decorating equipment.

Element	Performance criteria
Identify the purpose and process stages for printing and decorating	$ Purpose of the printing and decorating process is identified $ Changes in materials are identified at each stage of the printing and decorating process $ Equipment and components for each production stage are identified $ Characteristics of the product produced and the requirements for the printing process are identified in relation to the impact of the process on product quality and usability $ Stages in process are compared with the quality requirements for the product printing
Identify work requirements for printing and decorating operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of printing and decorating equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - base materials inputs and outputs - dyes and print chemical colours - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Set up and check printing and decorating equipment	$ Equipment information, required quality specifications and standard operating procedures are identified $ Equipment is set up following workplace procedures and within recommended specifications $ Printing and decorating settings and equipment adjustments are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements including surface condition and materials thickness $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures $ Surface preparation operations provide for even and consistent surface for printing
Monitor printing and	$ Printing and decorating operations are monitored noting product quality, ink adherence,

decorating operation	production outputs, equipment operating pressures, colour, thickness and product integrity $ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Printing and decorating process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Set up and operate printing and decorating equipment for rigid products
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of printing and decorating equipment, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of printing and decorating equipment, machine components and the materials used
	$ describe changes to materials during the printing and decorating process
	$ identify and use processes to test ink viscosity and adherence
	$ explain the impact of printing and decorating machine speed, pressure, time and temperature on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the printing and decorating process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the printing and decorating process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the printing and decorating equipment operation and product development
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ factors which influence viscosity and adherence of inks
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Printing and decorating equipment, materials and operating procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting printing and decorating in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Run tyre building machines PMB PROD18 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of tyre building machines.

Element	Performance criteria
Identify the purpose and process stages for tyre building	$ Purpose of the tyre building production process is identified $ Changes in materials are identified at each stage of the tyre building process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements for tyre building operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of tyre building equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments and housekeeping
Check tyre building machine set up	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Tyre building machine settings including shaping pressures and mould squeeze, loader arm, stripper arms are set to specification $ Length of overlay adjustments is checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor tyre building machine operation	$ Carcass is loaded into building drum and appropriate treads are placed into server and spliced $ Appropriate numbering and tyre identification marks are made to tyres following workplace procedures $ Tread centre light is checked and overlay applier is operated ensuring appropriate stock is loaded

	$ Lining spray is applied and tyre loader arm is adjusted to allow for stretch height and roundness $ Tyre building machine operations are monitored noting product quality, production outputs, equipment operating temperatures, pressures, thickness and product integrity $ Bladder condition is checked for stretch height and roundness and green tyre is checked before curing $ Mould centres are checked after curing $ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Tyre building process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run tyre building machines
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of tyre building Machines monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards.$ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of tyre building equipment, machine components and the materials used
	$ describe changes to materials at the stages of tyre building
	$ explain the impact of tyre building machine rotational speed, pressure, temperature, on product quality and production output
	$ explain the terms radial force, inflation pressure, lateral force harmonics and conicity
	$ identify and describe own role and the roles of others involved preparing components for the tyre building process and in product inspection and testing
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the tyre building production process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain

	both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the tyre building equipment operation and product development
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition materials in the tyre building process
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Tyre building equipment, appropriate process specifications and materials
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting tyre building in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Run roller building equipment PMB PROD19 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of roller building equipment.

Element	Performance criteria
Identify the purpose and process stages for roller building	$ Purpose of the roller building production process is identified $ Changes in materials are identified at each stage of the roller building process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements for roller building operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of roller building equipment and components are identified $ Materials are identified including base raw materials and required additives $ Appropriate rubber, adhesives and solvent type is selected to meet product specifications $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments and housekeeping
Check roller building process set up and materials	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Roller building settings, stop bars, and pressure wheel adjustments are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Rubber sheet is measured and cut $ Non-conforming materials are discarded or re sanded in accordance with workplace procedures
Build rubber rollers	$ Rollers are numbered in accordance with workplace procedures $ Excess rubber is sanded off to ensure a rough metal surface for adhesion $ Measurements are taken and compared with specifications $ Trimming of edges is flush with rollers and waste is minimised

	$ Plates are used to restrict flow of rubber during curing $ Roller building operations are monitored noting adhesion, rubber build up, overlap, product quality, production outputs, equipment operating temperatures $ Adjustments are made to remedy faults and non-conformity to production standards $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment cleanup, lubrications, adjustments and waste management are completed in accordance with workplace procedures $ Product quality including thickness and product integrity compared with process specifications for green rubber product
Respond to product quality improvement requests	$ Roller building process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run roller building equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of roller building equipment and processes the key requirements are monitoring product quality, maintaining personal safety and the safety of others within the context of required production output and product standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of roller building equipment, machine components and the materials used
	$ identify short mouldings, sink marks, voids, burn marks, mica and splash marks, silver streaking, blistering, flow marks, poor surface finish, warping, windows, erratic cycles, poor colour dispersion, uneven colour, ejection damage, contamination and black spots
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of roller building machine temperature, pressure and adhesive flash off time on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the roller building process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the roller building production process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both

	product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the units *Apply materials and process knowledge to complete work operations* and the relevant vulcanising unit.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the roller building equipment operation and product development
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Roller building equipment, relevant materials and product specifications
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting roller building in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Run foam injection moulding equipment PMB PROD20 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of foam moulding equipment.

Element	Performance criteria
Identify the purpose and process stages for foam moulding	$ Purpose of the foam moulding process is identified $ Changes in materials are identified at each stage of the foam moulding process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements for foam moulding operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of foam moulding equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Check foam moulding process set up	$ Equipment information, required quality specifications and set up cards are read $ Foam moulding equipment settings and adjustments for temperature, speed, timing and shot size are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor foam moulding operation	$ Foam moulding operations are monitored noting product quality, production outputs, equipment operating temperatures, speed, weight and product integrity $ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures

Respond to product quality improvement requests	$ Foam moulding process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run foam injection moulding equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of foam (flexible and solid) moulding equipment, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of foam moulding equipment, machine components and the materials used
	$ describe the foam moulding cycle
	$ identify and read transducers for hydraulic position and clamping force
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of foam moulding machine speed, pressure, time and temperature, on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the foam moulding process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the foam moulding production process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*
Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function: $ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the foam moulding equipment operation and product development

	$ location and specifications for pressure gauge readings
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ the role of chillers in the injection process
	$ the necessity for and timing of purging operations
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Foam moulding equipment, raw materials and workplace documentation
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting foam moulding in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Run rotational moulding equipment PMB PROD21 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of rotational moulding equipment.

Element	Performance criteria
Identify the purpose and process stages for rotational moulding	$ Purpose of the rotational moulding production process is identified $ Changes in materials are identified at each stage of the rotational moulding process $ Equipment and components used for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements for rotational moulding operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of rotational moulding equipment and components are identified $ Materials are identified including base raw materials and required pigments and additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - product weight, rotating and cooling cycle times, quantity and colour requirements - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments and housekeeping
Check rotational moulding process setup	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Mould condition, gas jets, mould speed, rotation ratio, heat cycles and oven temperature settings and fit on inserts and water nozzles integrity are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor rotational moulding operation	$ Operations are monitored noting product quality, production outputs, equipment operating temperatures, amperages, parting line, pressures, colour, cooling time, wall thickness and product integrity $ Adjustments are made to remedy faults and non-conformity to production standards

	where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Rotational moulding process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run rotational moulding equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of rotational moulding equipment, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards. $ Rotational moulding equipment is used for container/packaging, product housing, waste/refuse, safety, agriculture, marine, automotive, home and office applications, recreation and lighting. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of rotational moulding equipment, machine components and the materials used
	$ identify blisters, holes, porosity, bridging and voids, discolouration, brown spots, excessive flashing, holes around inserts, holes at parting lines, poor flow at recesses, poor fusion/flow, poor release from mould, uneven wall thickness, warped parts
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of rotational moulding machine speed, pressure, time, temperature, tension, wind off speed on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the rotational moulding process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the rotational moulding process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the units *Apply materials and process knowledge to complete work operations* and *Conduct compounding operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and/or electronic principles which influence the rotational moulding equipment operation and product development
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Rotational moulding equipment, materials and job specification
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting rotational moulding in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Machine lay up of composites PMB PROD22 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of equipment for the machine lay up of composites plastic.

Element	Performance criteria
Identify the purpose and process stages for machine lay up of composites	$ Purpose of the fibreglassing production process is identified $ Changes in materials and product characteristics are identified at each stage of the machine lay up process $ Equipment and components for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements for machine layup operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of machine applicators and related equipment and components are identified $ Materials are identified including base raw materials and additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments and housekeeping $ Work area is cleaned and appropriately isolated from contamination
Check machine layup process setup	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Equipment settings and adjustments are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor machine layup operation	$ Work isolation from contamination is maintained $ Layup operations are monitored noting product quality, production outputs, equipment operating pressures, coverage, evenness, thickness and product integrity $ Adjustments are made to remedy faults and non-conformity to production standards

	where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment and materials are used within planned work sequence and specifications $ Equipment cleanup, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Machine layup process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Machine layup of composites
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of machine lay up equipment including chopper guns and pressure roller applicators, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of machine lay up equipment, machine components and the materials used
	$ describe changes to materials at the stages of production conducted by the employee$
	$ explain the impact of equipment speed, pressure, temperature, on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the machine lay up process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the machine lay up production process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials including solvents, read relevant safety information and apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process*

	knowledge to complete work operations.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the machine lay up equipment operation and product development
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Machine lay-up equipment, materials, work area and job specification
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting machine lay up in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Set up and operate electrostatic coating equipment PMB PROD23 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of electrostatic coating equipment.

Element	Performance criteria
Identify the purpose and process stages for electrostatic coating	$ Purpose of the electrostatic coating production process is identified $ Changes in materials are identified at each stage of the electrostatic coating process $ Equipment and components for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements for electrostatic coating operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of electrostatic coating equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Set up and check electrostatic coating equipment	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Equipment is set up following workplace procedures and within recommended specifications $ Electrostatic coating settings and adjustments are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor electrostatic coating operation	$ Electrostatic coating operations are monitored noting product quality, production outputs, equipment operating temperatures, amperages, pressures, colour, thickness and product integrity $ Adjustments are made to remedy faults and non-conformity to production standards where applicable

	$ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Electrostatic coating process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Set up and operate electrostatic coating equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of electrostatic coating equipment, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of electrostatic coating equipment, machine components and the materials used
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of electrostatic coating machine speed, pressure, time and temperature on product quality and production output$ identify and describe own role and the roles of others involved directly in the electrostatic coating process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the electrostatic coating process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*
Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function: $ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles

	which influence the electrostatic coating equipment operation and product development
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Electrostatic coating equipment, materials and operating procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting electrostatic coating in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Inspect tyres for retreading PMB PROD24 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the inspection and testing of tyre casings for retreading.

Element	Performance criteria
Establish work requirements	$ Equipment and components used at each stage of inspection and retreading are identified $ Characteristics are identified of finished and second hand tyres in relation to the impact of the retread process on product quality and safety $ Work requirements are identified from workplace approved operating procedures $ Hazards connected with testing of tyres are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - casing size - construction - compound - defects in casing are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - stages in the inspection process to check product quality - waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Inspect tyre casings	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Inspection equipment settings and adjustments are checked for conformity to documented procedures $ Casings are checked for conformity with specification requirements $ Non-conforming tyres are discarded in accordance withworkplace procedures
Complete work requirements	$ Tyres suitable for retreading are tagged following workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Participate in process improvements	$ Inspection process and test equipment are monitored and conditions which may affect inspection standards are noted $ (Any) variations are reported within workplace procedures $ When authorised changes in standard operating procedures and specifications are made they are noted and implemented

UNIT	Inspect tyres for retreading
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	

Job role context	This unit applies to employees required to inspect, categorise and accept or reject used tyre casings for retreading
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify work processes and equipment for inspecting used tyres
	$ recognise tyre size, speed rating and aspect ratio markings of sample tyres
	$ interpret relevant safety information within requirements of employer=s duty of care
	$ locate, interpret and apply relevant informationin relation to specifications and work or equipment instructions
	$ maintain workplace records and computer tag inputs
	$ identify and safely handle relevant equipment, substances, other products and materials
	$ apply safety precautions appropriate to tyre testing procedures and the retread factory environment.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ tyre structural components and the purpose of each component in the tyre construction in terms of safe operation and structural integrity
	$ tyre retread processes and the differences between mould cure and pre cure retreading
	$ test procedures and procedures for checking tyre suitability
	$ identification and correct use of personally used workplace equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Tyre casings and inspection equipment
Consistency in performance may include	Establishes effective working relationships with colleagues Test procedures identify suitable tyres for retreading Useable waste is minimised Identifies and adapts to workplace objectives, cultures, products, customers and services Modifies activities to cater for variations in workplace contexts and environment Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in an workplace simulated facility with relevant process equipment, simulated job orders, work instructions and deadlines.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	1	2	1

UNIT	Lay on tyre retreads PMB PROD25 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the fitting of retreads to prepared casings.

Element	Performance criteria
Establish work requirements	$ Equipment treads and adhesives used when fitting retreads are identified $ Characteristics of finished and second hand tyres are identified in relation to the impact of the retread process on product quality and safety $ Work requirements are identified from workplace approved operating procedures $ Requirements for checking - casing size - construction - compound - defects in casing - retread size and type are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - stages in the inspection process where checks for product quality - waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Complete work requirements	$ Tags are checked for required relevant information $ Treads are layed onto casings in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Participate in process improvements	$ Inspection process and test equipment are monitored and conditions which may affect inspection standards are noted $ (Any) variations are reported within workplace procedures $ When authorised changes in standard operating procedures and specifications are made they are noted and implemented

UNIT	Lay on tyre retreads

Range of variables

This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity.

The common range of variables should be used to assist in planning assessment and training activities.

Job role context	This unit applies to employees engaged in fitting the retreads to prepared casings.

Evidence guide

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify work processes and equipment for inspecting used tyres
	$ recognise tyre size, speed rating and aspect ratio markings and compounds of sample tyres
	$ interpret relevant safety information within requirements of duty of care, particularly in relation to adhesives and solvents
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle relevant equipment, substances, other products and materials
	$ apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ production workflow in terms of retreading operations
	$ tyre retread processes and the differences between mould cure and pre cure retreading
	$ identification and correct use of personally used workplace equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Prepared casings, retreads, consumables and equipment
Consistency in performance may include	Establishes effective working relationships with colleagues Identifies and adapts to workplace objectives, cultures, products, customers and services Modifies activities to cater for variations in workplace contexts and environment Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in an workplace simulated facility with relevant process equipment, simulated job orders, work instructions and deadlines.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
1	1	1	2	1	1	1

UNIT	Run hot melt coating machines PMB PROD26 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of hot melt coaters.

Element	Performance criteria
Identify the purpose and process stages for coating the material	$ Requirements of the hot melt coating process are identified in relation to customer order and final product use $ Changes in look and characteristics of materials are identified at each stage of the coating process $ Equipment and components used for each process stage are identified $ Characteristics of the coated product are identified in relation to the product quality and customer use $ Outcomes of product preparation are compared with the quality requirements for the product at each stage of the process
Identify work requirements for hot melt coating	$ Work requirements are identified from workplace approved standard operating procedures $ Equipment and processes used for materials preparation, coating process and for the rolling off operations are identified $ Operating principles of hot melt coating equipment and components are identified $ Materials are identified including base raw materials and additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - customer order, workplace formulas and specification selection to meet order - machine set up including temperatures, tensions, materials pathway, adhesive quantity and type - adhesive type, quantity and melt requirements - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments and housekeeping
Check hot melt coating process setup	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Settings and adjustments are checked for conformity to documented procedures $ Materials are checked for conformity to workplace requirements and customer order $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor coating	$ Coating operations are monitored noting product quality, production outputs, equipment

operation	nip settings, operating temperatures, amperages, time, tensions, pressures, colour, adhesive and protective coating thickness and sheet width $ Printing process for backings provide appropriate coverage and readability $ Emulsion coverage of hot melt adhesive is level and at the appropriate thickness $ Excessive adhesive is evenly scraped from the surface, collected appropriately and recycled/removed to waste according to quality requirements $ Tests for coverage with dye and water baths are conducted $ Temperatures are measured and monitored to ensure appropriate range is maintained $ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment cleanup, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Coating process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run hot melt coating machines
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of hot melt coating machines monitoring the process, maintaining personal safety and the safety of others within the context of customer order and product quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of hot melt coating equipment, machine components and guides
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of hot melt coating machine settings, speed, pressure, time, temperature and tension on product quality and production output
	$ explain the potential effects of foreign objects in the nip area on the compounded materials
	$ identify and describe own role and the roles of others involved directly in the hot melt coating process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the hot melt coating process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both

	product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products, remove materials from rollers read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations* and the unit *Set up equipment for continuous operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the hot melt coating equipment operation and product development
	$ the impact that temperature differentials in the rollers, chemical reactions and mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Hot melt coating equipment, appropriate raw materials, and product specifications
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting the hot melt coating process in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Run cold coating machines PMB PROD27 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes in operating cold coaters.

Element	Performance criteria
Identify the purpose and process stages for coating the material	$ Requirements of the cold coating process are identified in relation to customer order and final product use $ Changes in look and characteristics of coated materials are identified at each stage of the coating process $ Equipment and components used for each process stage are identified $ Characteristics of the coated product are identified in relation to the product quality and customer use $ Outcomes of the preparation are compared with the quality requirements for the coated material at each stage of the process
Identify work requirements for cold coating operations	$ Work requirements are identified from workplace approved standard operating procedures $ Equipment and processes used for materials preparation, coating process and for the rolling off operations are identified $ Operating principles of cold coating equipment and components are identified $ Materials for backing material, adhesive layers and label stock are identified $ Hazards connected with materials and process are identified by observing equipment and reading workplace reference materials, including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - customer order, workplace formulas and specifications to meet order - machine set up including temperatures, tensions, materials pathway, adhesive quantity and type - adhesive type, quantity and melt requirements - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments and housekeeping
Check cold coating process setup	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Settings and adjustments are checked for conformity to documented procedures $ Materials are checked for conformity to workplace requirements and customer order $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor coating operation	$ Coating operations are monitored noting product quality, production outputs, equipment nip settings, temperatures, amperages, time, tensions, pressures, colour, adhesive and

	protective coating thickness and sheet width $ Printing process for backings provide appropriate coverage and readability $ Emulsion coverage of adhesive and silicone are level and at the appropriate thickness $ Surface preparation for the printing process is checked $ Tests for coverage with dye and water baths are conducted $ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Coating process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run cold coating machines
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of cold coating machines monitoring the process, maintaining personal safety and the safety of others within the context of customer order and product quality standards $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of cold coating equipment, machine components and guides
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of cold coating machine settings, speed, pressure, time, temperature and tension on product quality and production output
	$ explain the potential effects of foreign objects in the nip area on the compounded materials
	$ identify and describe own role and the roles of others involved directly in the cold coating process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the cold coating process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output

	$ locate, interpret and apply relevant information and maintain workplace records $ identify and safely handle products, remove materials from rollers read relevant safety information and apply safety precautions appropriate to the task.
Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations* and the unit *Set up equipment for continuous operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the cold coating equipment operation and product development
	$ the impact that temperature differentials in the rollers, chemical reactions and mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Cold coating equipment, appropriate raw materials, and product specifications
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting the cold coating process in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Set up and operate sheet feed vacuum forming equipment PMB PROD28 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of sheet feed, fabrication vacuum forming equipment.

Element	Performance criteria
Identify the purpose and process stages for fabrication vacuum forming	$ Purpose of fabrication vacuum forming production process is identified $ Changes in materials are identified at each stage of the process $ Equipment and components for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the fabrication vacuum forming process on product quality $ Stages in product processing are compared with the quality requirements for the product
Plan vacuum forming operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, vacuum forming process and for the operations are identified $ Operating principles of vacuum forming equipment and components are identified $ Materials are identified including appropriate sheet size, thickness, colour and material type $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials specifications - ancillary supplies and equipment - product quality requirements are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Set up and check vacuum forming equipment setup	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Equipment is set up following workplace procedures and within recommended specifications $ Vacuum forming settings and adjustments are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures $ Any required identification markings are set up to required workplace procedures
Conduct vacuum forming operation	$ Vacuum forming operations are conducted following the planned sequence $ Product quality, equipment operating temperatures, amperages, pressures, and product

	integrity are checked $ Adjustments are made to settings to remedy product non-conformity to specified standards where applicable $ Required quantity of product is produced, checked for quality and placed in workplace approved holding areas $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Unused materials are stored, equipment cleaned up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Vacuum forming process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Set up and operate sheet feed vacuum forming equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of vacuum forming equipment, monitoring equipment operation and product formation, maintaining personal safety and the safety of others within the context of required production output and product quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of vacuum forming equipment, machine components and the materials used
	$ describe changes to materials at the stages of vacuum forming process
	$ explain the impact of vacuum forming machine pressure and temperature on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the vacuum forming process
	$ explain the effect of unauthorised or emergency shut down of equipment on the vacuum forming production process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials: read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the vacuum forming equipment operation and product development
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Vacuum forming equipment, materials, operating procedures and product specifications
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting vacuum forming in order to maintain production output and product qualityWork completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Run polystyrene shape moulding equipment PMB PROD29 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of polystyrene foam shape moulding equipment.

Element	Performance criteria
Identify the purpose and process stages for polystyrene shape moulding	$ Purpose of the polystyrene shape moulding process is identified $ Changes in materials structure and form are identified at each stage of the polystyrene shape moulding process $ Equipment and components for each production stage are identified $ Characteristics of the product produced are identified in relation to the impact of the production process on product quality $ Stages in product processing are compared with the quality requirements for the product
Identify work requirements for polystyrene shape moulding operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of polystyrene shape moulding equipment and components are identified $ Materials are identified including base raw materials and additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - chemical requirements to maintain clean steam - water quality within specifications - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - product input, process and output quality testing requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Check polystyrene shape moulding process setup	$ Equipment information, required quality specifications and set up cards are read $ Polystyrene shape moulding equipment settings and adjustments for temperature, compression and pressure are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor polystyrene shape moulding operation	$ Polystyrene shape moulding operations are monitored noting product quality, production outputs, steam temperatures, weight, polystyrene density and product integrity $ Adjustments are made to remedy faults and non-conformity to production standards

	where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Polystyrene shape moulding process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run polystyrene shape moulding equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of polystyrene (flexible and solid) shape moulding equipment, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of polystyrene shape moulding equipment, machine components and the materials used
	$ describe the polystyrene shape moulding cycle
	$ explain the importance of even density, standard size and weight for the products
	$ describe changes to materials at the stages of production conducted by the employee$
	$ identify and describe own role and the roles of others involved directly in the polystyrene shape moulding process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the polystyrene shape moulding production process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task including safety around boilers and working with steam and chemicals.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the polystyrene shape moulding equipment operation and product development
	$ location and specifications for pressure gauge readings
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ use of calibre burier to measure the block within specified tolerances
	$ mechanisms to measure the density of foam
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Polystyrene shape moulding equipment, raw materials and workplace documentation
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environmentWork consistently shows evidence of following logical work sequences in conducting polystyrene shape moulding in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Monitor process operations PMB PROD30 A
FIELD	Production
DESCRIPTION	This unit applies to employees who use production processing equipment.

Element	Performance criteria
Identify equipment controls and procedures	$ Work requirements are identified from workplace approved operating procedures $ Operating procedures and controls are checked to identify approved adjustments and operating parameters $ Actions used in the event of faulty production are established from operating procedures $ Procedures for obtaining materials for the process are identified
Establish work requirements	$ Ancillary tools and equipment are identified and assembled $ Inspection procedure is established $ Any finishing activities are identified $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Equipment emergency stops and guards are identified $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Any required supplementary equipment for product quality testing or routine lubrication and adjustments are identified
Maintain operations	$ Operations are monitored noting product quality, production outputs and waste within workplace required procedures $ Product outputs are collected, checked for conformity, adjustments made (where applicable) and stored $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures (where applicable) $ Readouts are checked against standard statistical process information and production data is entered into the control system $ Equipment and work area clean up and waste management are completed in accordance with workplace procedures
Identify product quality requirements	$ Process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Maintain process operations
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	

Job role context	Work involves the removal of product from equipment in strict conformity with standard operating procedures and routine quality inspection.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify and operate safety cut outs and guards
	$ read and interpret operating procedures and inspection guidelines
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role., particularly any *finish products* units. *Use materials and process knowledge to complete work operations* is a corequisite to this unit.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ procedure for reporting non-conformity of product or interruption to production flow
	$ production workflow requirements for process
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Production equipment, standard operating procedures, unprocessed materials
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	1	2	1	1	1

UNIT	Set up and operate film printing and decorating equipment PMB PROD31 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of printing and decorating equipment.

Element	Performance criteria
Identify the purpose and process stages for printing and decorating on flexible films	$ Purpose of the printing and decorating process is identified $ Changes in materials are identified at each stage of the printing and decorating process $ Equipment and components for each production stage are identified $ Characteristics of the product produced and the requirements for the printing process are identified in relation to the impact of the process on product quality and usability $ Stages in process are compared with the quality requirements for the product printing
Identify work requirements for flexible printing and decorating operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, production process and for the downstream operations are identified $ Operating principles of printing and decorating equipment and components are identified $ Materials are identified including base raw materials and additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - base materials inputs and outputs - dyes and print chemical colours - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority, identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Set up and check printing and decorating equipment	$ Equipment information, required quality specifications and standard operating procedures are identified $ Equipment is set up following workplace procedures and within recommended specifications $ Printing and decorating settings and equipment adjustments are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements including surface condition and materials thickness $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor printing and decorating operation	$ Printing and decorating operations are monitored noting product quality, ink adherence, production outputs, equipment operating pressures, colour, thickness and product

	integrity $ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Printing and decorating process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Set up and operate film printing and decorating equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of printing and decorating equipment, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of printing and decorating equipment, machine components and the materials used
	$ describe changes to the flexible film base and the inks and dyes used during the printing and decorating process
	$ identify and use processes to test ink viscosity and adherence$ explain the impact of printing and decorating machine speed, pressure, time and temperature on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the printing and decorating process
	$ decide if they (the operator) are able to rectify the fault or if assistance is required
	$ explain the effect of unauthorised or emergency shut down of equipment on the printing and decorating process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials; read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the printing and decorating equipment operation and product development
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ factors which influence viscosity and adherence of inks
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Printing and decorating equipment, materials and operating procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting printing and decorating in order to maintain production output and product qualityWork completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Set up and operate thermal bending equipment PMB PROD32 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of thermal bending equipment.

Element	Performance criteria
Identify the purpose of the thermal bending process	$ Purpose of the thermal bending process is identified $ Expected changes in materials as a result of the are identified $ Equipment and components used are identified $ Characteristics of the final product are identified in relation to the impact of the bending process on product quality
Preplan thermal bending operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation and bending process are identified $ Operating principles of thermal bending equipment and components are identified $ Hazards connected with the process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for - materials quality and quantity - (any) ancillary supplies and equipment - specifications and/or plans are read and interpreted - product quality requirements for the materials are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned including identifying: - times in the process where checks for quality of equipment operation are within specifications - waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments $ Safe and suitable work area is selected
Set up thermal bending equipment	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Settings and adjustments are checked for conformity to documented procedures $ Materials are checked for conformity with specified requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Conduct bending operations	$ Bending operations are conducted following the planned sequence $ Product quality, equipment operating temperatures, amperages, pressures, and product integrity are checked $ Adjustments are made to settings to remedy product non-conformity to specified standards where applicable $ Required quantity of product is produced, checked for quality and placed in workplace approved holding areas $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Unused materials are stored, equipment cleaned up, lubrications, adjustments and waste management are completed in accordance with workplace procedures

Respond to product quality improvement requests	$ Bending process is monitored and materials and equipment operating conditions which may affect product quality standards are noted $ Variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Set up and operate thermal bending equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of thermal bending equipment (acrylic, PET and PVC), monitoring production, maintaining personal safety and the safety of others within the context of required product output and product quality standards $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of thermal bending equipment and the materials used
	$ describe changes to materials in the bending process
	$ explain the impact of machine temperature and pressure on product quality and production output
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ use appropriate workplace language and communication technologies
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials, read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence thermal bending equipment operation
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ production output requirements
	$ focus of operation of work systems and equipment
	$ application of relevant agreements, codes of practice or legislation
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Appropriate PVC, acrylic and/or PET materials, thermal bending equipment and product specifications

Consistency in performance may include	Establishes effective working relationships with colleagues
	
	Modifies activities with variations in workplace contexts and environment
	
	Work consistently shows evidence of following logical work sequences in conduting in order to maintain production output and product quality
	
	Shows evidence of applying relevant workplace procedures including:
	$ hazard policies and procedures
	$ issue resolution procedures
	$ job procedures and work instructions
	$ guidelines relating to the safe use of machinery and equipment
	$ quality assurance procedures (where existing)
	$ security procedures
	$ housekeeping processes$ waste, pollution and recycling management processes
	
	Action taken promptly - accidents and incidents reported within regulatory requirements and following workplace procedures
	
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on or off the job.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Follow hygiene procedures PMB PROD33 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply hygiene procedures to the production process.

Element	Performance criteria
Identify and follow workplace procedures for hygiene hazard identification and risk control	$ Workplace requirements for identifying sources of contaminants and related hygiene prevention measures are identified $ Workplace procedures for reacting to the presence of contaminants in the production process are known and followed $ Hygiene practices in the workplace are identified
Contribute to arrangements for the control of hygiene	$ Reports to designated personnel are made of potential hygiene risks in accordance with workplace procedures $ Contributions to hygiene control in the workplace including raising hygiene issues are made within workplace procedures

UNIT	Follow hygiene procedures
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Work involves the application of hygiene control procedures to all aspects of the production process.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ Identify hygiene risks and sanitation requirements
	$ identify products, materials and work processes appropriate for the individual work role
	$ recognise sources and impact of potential contaminants and relevant procedures to minimise contamination risks
	$ interpret relevant safety information within requirements of duty of care
	$ use appropriate workplace language and communication technologies
	$ locate, interpret and apply relevant information
	$ contribute to the completion of workplace records
	$ identify and safely handle relevant equipment, substances, other products and materials and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role, particularly *Follow occupational health and safety procedures* and the relevant process unit(s).

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ production workflow in relation to the maintenance of contaminant free raw and processed materials
	$ focus of operation of work systems and equipment and potential for interaction as a contaminant for materials or products
	$ identification and correct use of personal hygiene related workplace equipment,

	processes and procedures $ planning own work including predicting consequences and identifying improvements
Resource implications	Production facility, products for medical, food production or contaminant free storage requirements, workplace procedures and job orders
Consistency in performance may include	Establishes effective working relationships with colleagues Identifies and adapts to workplace objectives, cultures, products, customers and services Modifies activities to cater for variations in workplace contexts and environment Action taken promptly to report contamination sources and instances within workplace procedures Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in an workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	1	2	2

UNIT	Monitor product quality standards PMB PROD34 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to monitor work output and follow workplace procedures for maintaining quality control.

Element	Performance criteria
Follow the appropriate quality procedures	$ Procedures and specifications for the work process are identified and read $ Parameters which will influence product quality and process efficiency are identified $ Procedures are followed ensuring that all components of the quality procedure are implemented
Monitor processes for indications of product quality	$ Materials quality is assessed and contaminants are identified and removed $ Machine indicators, settings and adjustments are checked for conformity with quality procedures/ standard operating procedures/specifications $ Product condition is inspected for imperfections or irregularities
Identify and control variations	$ Trends in production variations are identified and possible causes of the variations are noted $ Potential corrective procedures are identified and confirmed following workplace procedures for testing or checking with supervisory staff $ Variations are implemented consistent with workplace procedures and extent of authorisation $ Records of variations are maintained and forwarded to appropriate personnel incorporating any recommendations
Identify improvements to optimise performance	$ Work procedures, specifications or standard operating procedures for the production are examined to identify how the variations observed may be minimised or eliminated $ Improvements are suggested and provided to appropriate personnel

UNIT	Monitor product quality standards
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Work involves the monitoring of production and the application of workplace procedures to maintain quality outcomes.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ monitor production and identify production variables$ perform allowable adjustments to maintain quality standards
	$ locate, interpret and apply relevant information
	$ maintain workplace records in relation to production quality and variations
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. *Use materials and process knowledge to complete work operations* is a

	prerequisite for this unit.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ equipment adjustment procedures
	$ scope of authority
	$ production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Production process, specifications and equipment
Consistency in performance may include	Establishes effective working relationships with colleagues Performs adjustments in accordance with workplace procedures Modifies activities to cater for variations in workplace contexts and environment Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	2

UNIT	Use materials and process knowledge to complete work operations PMB PROD35 A
FIELD	Production
DESCRIPTION	This unit is applicable to employees who are required to identify the equipment, processes, materials and end product so that work procedures and quality requirements can be met.

Element	Performance criteria
Identify materials, equipment and workplace documentation for production process	$ Workplace documentation relating to production processes is read $ Materials are identified and the effect the production process has on them is explained $ Equipment, tools and work checking procedures are identified $ Safety requirements for the materials and process are identified
Describe production process	$ The production process within own work area and throughout the production line is described $ Parts of the production process where extra care and attention is required are identified $ The operating principles of the equipment are identified and the effect of temperature, materials manipulation, chemical bonding and other process characteristics are described
Identify products	$ Products are inspected for compliance with quality specifications $ Products are identified in terms of end purpose and relationship to workplace production output and economic value $ Features of products are observed and related to the production process
Use work procedures to locate required equipment, materials and product storage areas	$ Work procedures are read and applied to the collection and storage of materials and/or equipment $ Procedures for the storage of product including the required safety precautions are identified and followed
Identify routine production and product faults	$ Production faults and potential causes are identified and described $ Product faults are observed and potential causes due to inappropriate production methods and materials quality described
Describe workplace procedures for reporting and rectifying faults	$ Workplace procedures for reporting production materials faults are read and explained to internal customers $ Extent of authority to rectify faults is described
Identify shut down procedures	$ Conditions which may require emergency shut down are identified $ Procedures for (any required) notification of shut down are noted $ Shut down procedures for breaks, short term discontinuance and other shut downs are described

UNIT	Use materials and process knowledge to complete work operations
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Information about product ion processes, requirements, products and customer uses of products is used to inform planning of own work.

	$ This competency is used within the context of operating under supervision in relation to progress and output of work with a requirement that discretion and judgement is exercised when completing own work within the production environment.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify properties and purposes of materials and products
	$ explain the characteristics of materials and product in relation to safe use, specific and storage requirements which may include toxicity, flammability, perishability, fragility, security risk, state and weight
	$ identify equipment, relevant workplace procedures and production processes
	$ describe procedures for reporting and rectifying faults in materials, production processes or products
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ production processes and materials processing requirements
	$ impact on economic performance of enterprise due to faulty products or inefficient production processes
	$ end use(s) of product(s) processed
	$ inventory and workplace stock records systems$ safe storage requirements
	$ production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to production process, products, raw and mixed materials, workplace materials and explanatory information.
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Faults in materials, processes and products promptly reported Rectification of faults is within scope of authority Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies

Collect, analyse & organise	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas &	Solve problems	Use technology

information				techniques		
2	2	1	1	1	2	2

UNIT	Operate hand held air/power equipment for production processes PMB PROD36 A
FIELD	Production
DESCRIPTION	This unit applies to employees who are required to use hand held air and power equipment to contribute to the production process.

Element	Performance criteria
Identify equipment and power requirements	$ Equipment for drilling, cutting and grinding is identified and matched to work applications $ Power and air supplies are identified for voltage, amperage, air pressure, lubrication and water separation $ Equipment is inspected for signs of damage or faults $ Accessories are identified in terms of suitability for purpose and operable condition
Describe emergency shut down procedures	$ Shut off buttons, switches and processes are identified $ Workplace procedures for reporting incidents are explained $ Shut down procedure sequence is identified
Identify hazards associated with using the equipment	$ The potential hazards from power source and appropriate safety procedures are identified $ Process byproducts which may cause damage to operator, environment, products, raw materials, other equipment or personnel and appropriate workplace procedures to manage these risks are described
Set up equipment and complete pre-use checks	$ Equipment settings, accessories and consumables are checked for appropriate condition $ Manufacturer=s or workplace instructions for equipment are read and used to inform work practices $ Equipment is set up for the required production process $ Equipment is checked through the full operating range required for the task
Use equipment for production processes	$ Equipment is operated following manufacturer=s or workplace instructions $ Appropriate consumables including cooling and lubricating fluids are used when required $ Provision is made to deal with swarf, offcuts and other byproducts
Store equipment appropriately	$ Equipment is cleaned prior to storage $ Equipment which is damaged, unserviceable or requiring service is tagged and appropriate steps taken to arrange repair $ Storage areas are maintained appropriately

UNIT	Operate hand held air/power equipment for production processes
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Work is conducted as part of production activities with the operator using discretion and judgement within established specifications, involving selection and use of equipment for cutting, grinding and drilling.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select appropriate tools, equipment and fittings
	$ plan and conduct drilling, cutting and grinding processes within workplace quality parameters
	$ maintain effective work station within appropriate environmental and safety regulations and procedures
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Air and power operated cutting, drilling and grinding equipment
Consistency in performance may include	Establishes effective working relationships with colleagues Work consistently shows the use of drills, grinders and powered cutting equipment within workplace agreed quality standards Work area and equipment is clean and well maintained Waste is minimised Modifies activities to cater for variations in workplace contexts and environment Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies						
Collect, analyse &	Commu-nicate ideas &	Plan & organise	Work with others & in	Use mathemati-cal	Solve problems	Use technology

organise information	information	activities	teams	ideas & techniques		
2	1	2	1	2	2	2

UNIT	Chemically join materials PMB PROD37 A
FIELD	Production
DESCRIPTION	This unit applies to employees who are required to use specialised equipment and processes to chemically join materials. *The unit will be designated for the relevant materials and process.*

Element	Performance criteria
Identify the materials and process	$ The process and materials to be used are identified $ The effect of the joining process on the materials in terms of chemical reactions and extent of the effect of the process on the materials is explained $ Allowances for joining overlaps are checked in workplace documentation and manufacturer=s instructions $ Curing/cooling times are identified for the materials and the process
Plan the joining process	$ Manufacturer=s instructions and workplace procedures for the joining task are read and used in the planning process $ Safety precautions for self, equipment and work areas appropriate for the tasks are identified $ Work sequence is planned noting appropriate curing/cooling times, efficient work sequence and quality specification requirements
Set up equipment and materials for the process	$ Equipment and consumables are assembled $ Equipment and site are checked for safety $ Adjustments and settings are made to suit materials, Manufacturer=s instructions and workplace procedures $ Safety screens, engineering controls and personal protection equipment are set up.
Follow workplace procedures to complete the joining process	$ Workplace procedures are followed in conjunction with the planned work sequence $ Checks and tests of the process and the finished product are made $ When required, appropriate adjustments are made to the process to maintain the quality of the finished product $ Workplace documentation and records are completed as required

UNIT	Chemically join materials
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	The joining process is conducted as part of production activities with the operator using discretion and judgement within established specifications, involving a chemical process.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select appropriate materials and joining process
	$ plan and conduct joining process within workplace quality parameters
	$ maintain effective work station within appropriate environmental and safety regulations and procedures

	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ nature of the changes in materials arising from the chemical process
	$ effects of the fumes, heat and other radiations
	$ effective and efficient use of materials equipment and consumables
	$ production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Materials, consumables and equipment appropriate to the joining process
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Joints conform to quality specifications Waste is minimised Materials suitable for recycling are appropriately handled Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	1	2	2	2

UNIT	Chemically cut materials PMB PROD38 A
FIELD	Production
DESCRIPTION	This unit applies to employees who are required to use specialised equipment and processes to chemically cut materials. *The unit will be designated for the relevant materials and process*.

Element	Performance criteria
Identify the materials and process	$ The process and materials to be used are identified $ The effect of the cutting process on the materials in terms of chemical reactions and extent of the effect of the process on the materials is explained $ Allowances for wastage are checked in workplace documentation and manufacturer=s instructions $ Curing/cooling times are identified for the materials and the process
Plan the cutting process	$ Manufacturer=s instructions and workplace procedures for the cutting task are read and used in the planning process $ Safety precautions for self, equipment and work areas appropriate for the tasks are identified $ Work sequence is planned noting appropriate curing/cooling times, efficient work sequence and quality specification requirements
Set up equipment and materials for the process	$ Equipment and consumables are assembled $ Equipment and site are checked for safety $ Adjustments and settings are made to suit materials, Manufacturer=s instructions and workplace procedures $ Safety screens, engineering controls and personal protection equipment are set up.
Follow workplace procedures to complete the cutting/joining process	$ Workplace procedures are followed in conjunction with the planned work sequence $ Checks and tests of the process and the finished product are made $ When required, appropriate adjustments are made to the process to maintain the quality of the finished product $ Workplace documentation and records are completed as required

UNIT	Chemically cut materials
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	The cutting process is conducted as part of production activities with the operator using discretion and judgement within established specifications, involving a chemical process.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select appropriate materials and cutting process
	$ plan and conduct cutting process within workplace quality parameters
	$ maintain effective work station within appropriate environmental and safety regulations and procedures

	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ nature of the changes in materials arising from the chemical process
	$ effects of the fumes, heat and other radiations
	$ effective and efficient use of materials equipment and consumables
	$ production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Materials, consumables and equipment appropriate to the cutting process
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Cuts conform to quality specifications Waste is minimised Materials suitable for recycling are appropriately handled Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	1	2	2	2

UNIT	Mechanically join materials PMB PROD39 A
FIELD	Production
DESCRIPTION	This unit applies to employees who are required to use specialised equipment and processes to join materials by mechanical means. *The unit will be designated for the relevant materials and process.*

Element	Performance criteria
Identify the materials and process	$ The process and materials to be used are identified $ The effect of the joining process on the materials is identified $ Allowances for wastage and/or joining overlaps are checked in workplace documentation and manufacturer=s instructions
Plan the joining process	$ Manufacturer=s instructions and workplace procedures for the joining task are read and used in the planning process $ Safety precautions for self, equipment and work areas appropriate for the tasks are identified $ Work sequence is planned noting efficient work sequence and quality specification requirements
Set up equipment and materials for the process	$ Equipment and consumables are assembled $ Equipment and site are checked for safety $ Adjustments and settings are made to suit materials, manufacturer=s instructions and workplace procedures $ Safety screens, engineering controls and personal protection equipment are set up
Follow workplace procedures to complete the joining process	$ Workplace procedures are followed in conjunction with the planned work sequence $ Checks and tests of the process and the finished product are made $ When required, appropriate adjustments are made to the process to maintain the quality of the finished product $ Workplace documentation and records are completed as required

UNIT	Mechanically join materials
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	The mechanical joining process is conducted as part of production activities with the operator using discretion and judgement within established specifications.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select appropriate materials and joining process
	$ plan and conduct joining process within workplace quality parameters
	$ maintain effective work station within appropriate environmental and safety regulations and procedures
	$ locate, interpret and apply relevant information

	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ nature of the changes in materials arising from the process
	$ effective and efficient use of materials equipment and consumables
	$ production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Materials, consumables and equipment appropriate to the joining process
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Joints conform to quality specifications Waste is minimised Materials suitable for recycling are appropriately handled Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	1	2	2	2

UNIT	Mechanically cut materials PMB PROD40 A
FIELD	Production
DESCRIPTION	This unit applies to employees who are required to use specialised equipment and processes to cut materials. *The unit will be designated for the relevant materials and process*.

Element	Performance criteria
Identify the materials and process	$ The process and materials to be used are identified $ The effect of the cutting process on the materials is explained $ Allowances for wastage and/or joining overlaps are checked in workplace documentation and manufacturer=s instructions
Plan the cutting process	$ Manufacturer=s instructions and workplace procedures for the cutting task are read and used in the planning process $ Safety precautions for self, equipment and work areas appropriate for the tasks are identified $ Work sequence is planned noting efficient work sequence and quality specification requirements
Set up equipment and materials for the process	$ Equipment and consumables are assembled $ Equipment and site are checked for safety $ Adjustments and settings are made to suit materials, manufacturer=s instructions and workplace procedures $ Safety screens, engineering controls and personal protection equipment are set up
Follow workplace procedures to complete the cutting process	$ Workplace procedures are followed in conjunction with the planned work sequence $ Checks and tests of the process and the finished product are made $ When required, appropriate adjustments are made to the process to maintain the quality of the finished product $ Workplace documentation and records are completed as required

UNIT	Mechanically cut materials
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	The cutting process is conducted as part of production activities, with the operator using discretion and judgement within established specifications.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select appropriate materials and cutting process$ plan and conduct cutting process within workplace quality parameters
	$ maintain effective work station within appropriate environmental and safety regulations and procedures
	$ locate, interpret and apply relevant information
	$ maintain workplace records

	$ identify and safely handle products and materials $ apply safety precautions appropriate to the task.
Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ nature of the changes in materials arising from the process
	$ effective and efficient use of materials equipment and consumables
	$ production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Materials, consumables and equipment appropriate to the cutting process
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Cuts conform to quality specifications Waste is minimised Materials suitable for recycling are appropriately handled Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	1	2	2	2

UNIT	Sample, inspect and test products to specifications PMB PROD41 A
FIELD	Production
DESCRIPTION	This unit applies to employees required take product samples, identify and apply testing procedures, interpret test results and report findings.

Element	Performance criteria
Establish specifications and test procedures	$ Product quality specifications are read, drawings interpreted and test parameters are identified $ Test methods for each required test parameter are identified and the most efficient test method is noted $ (any) requirements for testing by personnel external to the work area is identified and appropriate permission is obtained
Select evidence	$ Appropriate conforming and/or non-conforming products, materials and/or waste are selected for testing $ Observations of operators and copies of procedures are collected
Conduct and interpret tests	$ Tests are conducted following workplace procedures and results are documented $ Comparisons of all data collected are made $ Any recommendations are noted and considered for feasibility
Report findings	$ Findings of tests are documented $ (Any) potential or existing problems and appropriate recommendations are proposed and reported

UNIT	Sample, inspect and test products to specifications
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	This work involves the selection and conduct of sampling and testing to check product quality.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select, apply and interpret tests and results in accordance with company procedures
	$ use appropriate workplace language and communication technologies
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ test procedures
	$ production workflow in relation to required times and stages where testing is required
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures

	$ planning own work including predicting consequences and identifying improvements
Resource implications	Production facility, testing equipment and procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows the selection and application of appropriate tests and accurate interpretation of results Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	3	3	3

UNIT	Troubleshoot production faults and defects PMB PROD42 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to isolate, identify and repair faults in production.

Element	Performance criteria
Inspect stages of production to identify fault	$ Products are inspected to determine nature of faults at separate production stages $ Measurements are taken to check conformity with specifications $ Tests are conducted as appropriate on goods
Inspect machinery, raw materials	$ Materials are checked for conformity to specifications $ Mixing of materials is checked for adherence to formulae $ Samples taken for analysis if required
Propose causes of faults	$ Stage(s) of faulty production identified $ Cause(s) of faults are proposed $ (Any) alternative tests proposed to confirm diagnosis
Propose rectification and retest	$ (Any) repairs, adjustments or modifications to processes made $ (Any) alterations to raw materials affected $ Production resumed and products are re-tested to ensure conformity with specifications.

UNIT	Troubleshoot production faults and defects
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Work involves the inspection of product production faults, isolation and rectification of causes and re-testing of products.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ inspect product faults
	$ identify causes of faults
	$ propose rectifications
	$ test results of adjustments/modifications
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. particularly *Apply materials and process knowledge to complete work operations*, and may also be assessed with the unit *Isolate equipment faults.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ raw material requirements
	$ production machinery operation

	$ reporting relationships
	$ production process settings
	$ production workflow and impact of faults on production process
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Production process exhibiting process faults or faults in finished products
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Proposes practical and cost-effective solutions to problem Consistently identifies sources of information to assist in resolving production problems Rechecks work after instigating changes Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	3	3	3

UNIT	Shut down work area PMB PROD43 A
FIELD	Production
DESCRIPTION	This unit applies to employees responsible for shutting down equipment for maintenance or end of production run for a defined area.

Element	Performance criteria
Establish reasons for shutdown	$ Impact of shutdown on production capabilities is established $ When required appropriate personnel are contacted to establish reasons for shutdown $ Level of shutdown required is planned to suit reasons for close down within the context of the production schedule
Close down equipment	$ Appropriate personnel are informed of impending closedown of equipment $ Steps for closedown are followed to ensure no products or raw materials are left in inappropriate areas or equipment sections
Prepare equipment for idle period	$ Suitable guards, locks and notices are placed to prevent inadvertent startup $ Requirements for adjustments to controls, lubrication or corrosion control are notified to appropriate personnel or completed following workplace procedures
Complete workplace documentation	$ Notification of closed down equipment is provided to appropriate personnel $ Documentation and records are completed in line with company procedures

UNIT	Shut down work area
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	This work involves preparing for and closing down work area in accordance with established workplace procedures.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify equipment shutdown requirements and procedures
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. The unit *Conduct housekeeping activities* is a prerequisite and may be assessed in conjunction with this unit.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ equipment requirements for idle periods
	$ requirements for closedown procedures for mechanical, electrical, hydraulic, pneumatic and electronic equipment
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures

	$ planning own work including predicting consequences and identifying improvements
Resource implications	Production equipment for closing down, workplace procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows the selection and application of relevant workplace procedures to the closing down of equipment Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	1	1	1

UNIT	Apply materials and process knowledge to coordinate work operations PMB PROD44 A
FIELD	Production
DESCRIPTION	This unit is applicable to employees who are required to organise the work of others in relation to production operations.

Element	Performance criteria
Identify key features of the production process and the related materials	$ Information on the main physical features, functional characteristics and demand for product are analysed and used to inform work planning processes $ Production process steps are identified $ Materials requirements/characteristics are identified $ Effects of processes on materials are described $ Potential materials contamination points are identified $ Potential risks associated with the materials and process are described $ Implications of (any) shut downs of equipment in relation to materials, equipment condition, safety of employees and production schedules are identified
Describe procedures for identifying production faults	$ Faults are identified $ Process or materials problems are identified and separated $ Settings are adjusted according to workplace procedures $ Appropriate personnel contacted to effect repairs
Identify competency requirements for completing the production process	$ Required competencies are separated from procedural job performance $ Job tasks are itemised and listed $ Standard operating procedures are used to inform the identification process $ Competencies required by team members appropriate to undertake workplace activities are identified $ Individual records are checked to determine if appropriate competencies are held $ Access to training and assessment is facilitated $ Appropriate action is undertaken to match workplace requirements with employee competency level
Assist individuals to solve production problems	$ Advice is provided to group team members on characteristics of materials, processes and products to inform appropriate selection of work and quality checking techniques $ Causes of problems are isolated $ Opportunities for improvement of team member performance are identified and used appropriately $ Individuals are assisted in identifying sources of expertise to assist in competency development $ Appropriate information is brought to the attention of relevant personnel $ Queries are predicted and team members assisted to locate and assimilate information relevant to production process $ Personnel are assisted with routine and non-routine production process inquiries with actions taken to update information of production issues $ Personnel are encouraged to maintain and build knowledge through accessing process related information and the application of problem solving and information analysis skills $ Shut down procedures for emergencies, breaks and short and long term halts to production are explained to personnel
Contribute to continuous improvement	$ Knowledge of customer requirements is used to determine work design $ Potential problems are predicted and notified to appropriate personnel $ Opportunities for improvements to work organisation are identified

UNIT	Apply materials and process knowledge to coordinate work operations
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This competency involves the supervision of groups or teams in the production process. $ Responsibility for and limited organisation of, the work of others is involved. $ Discretion and judgement is exercised within routine methods and processes.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ communicate information on products and work system requirements
	$ identify competency needs of team members for prescribed tasks
	$ support team members in problem solving activities
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ process and materials characteristics
	$ fault finding procedures and rectification methods
	$ production workflow priorities, timelines and imperatives
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures$ planning own work including predicting consequences and identifying improvements

Resource implications	Work team, production schedules and equipment
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Consistently supports team members to complete production processes to consistent quality standards within required specifications Recognises and adapts to appropriate cultural differences in the workplace including modes of behaviour and interactions among staff and others Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies						
Collect,	Commu-nicate	Plan &	Work with	Use	Solve	Use

analyse & organise information	ideas & information	organise activities	others & in teams	mathemati-cal ideas & techniques	problems	technology
2	3	3	3	2	3	3

UNIT	Cut, shape and fabricate materials PMB PROD45 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to cut shape and form materials to shape.

Element	Performance criteria
Lay out materials	$ Specifications, patterns and/or plans are read and interpreted $ Safe and suitable work area is selected $ Tools and equipment are checked prior to use for conformity with specifications and safe condition $ Materials are laid out to meet pattern and specification requirements and minimise waste $ The aesthetics of the materials is maximised where this is appropriate, matching grains and patterns
Cut materials to shape	$ Pattern is cut marking points for further work process and other special requirements $ Unused materials are stored or recycled as required $ Tools and equipment are cleaned and stored appropriately
Form materials to shape	$ Sequence of work is planned to ensure assembly and fixing is in logical order $ Instructions and sequence for forming component is followed $ Materials are organised for forming $ Fixing methods and equipment are used following Manufacturer=s instructions $ Completed component shape meets required specifications $ Workplace documentation is completed and equipment, finished materials and unused consumables are stored appropriately

UNIT	Cut, shape and fabricate materials
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	This unit applies to the cutting, shaping and fabrication of materials.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select and operate appropriate equipment and processes
	$ plan and conduct work within workplace approved procedures and quality standards
	$ minimise wastage of materials and production time
	$ locate, interpret and apply relevant information
	$ maintain workplace records$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.
Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function: $ properties of materials and consumables in relation to reactions to the shaping, bonding, cutting and joining process and the interaction, compatibility/incompatibility of materials

	$ production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Patterns, plans, materials, tools and equipment
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Consistently lays out materials so as to minimise waste and maximise aesthetics Task performance provides evidence of coordinated consistent application of knowledge and skills within established enterprise benchmarks Minimises waste and recycles materials appropriately Checks own work and maintains optimum product quality and production times Maintains work area in a clean and tidy condition Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	2

UNIT	Hand mix materials PMB PROD46 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to hand mixing materials.

Element	Performance criteria
Identify the purpose and requirements for hand mixing	$ Purpose of the hand mixing process is identified $ Changes in materials are identified at each stage of the blending process $ Hand operated equipment and components used in the mixing process are identified $ Characteristics of the blended material produced are identified in relation to the impact on the production process and final product quality $ Stages in the blending process are compared with the quality requirements for the product
Preplan hand mixing operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials measurement, preparation, blending process and for the delivery of material to store or production area are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - formulae - ancillary supplies and equipment - product quality requirements for the relevant blending process stage(s) are identified and noted $ Task sequences are planned within scope of authority including identifying: - times and locations in the blending process where checks for product quality and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing
Check hand mixing setup	$ Equipment information, required quality specifications and standard operating procedures are identified $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to blending operations in accordance with workplace procedures
Conduct hand mixing operations	$ Hand mixing operations are monitored noting materials quantity and product quality $ Adjustments are made to remedy faults and non-conformity to product blend standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment cleanup and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Hand mixing process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and

	implemented

UNIT	Hand mix materials
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the hand mixing of materials. $ Operator function involves monitoring raw materials input, monitoring mixing, maintaining personal safety and the safety of others within the context of required formulae, product output and quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ Identify materials and describe changes to materials at the stages of production conducted by the employee
	$ identify the role friction plays in the blending of product
	$ describe causes and effects of variations in blended batches
	$ calculate volumes from formulae and identify volumes of mixing materials and containers
	$ identify and describe own role and the roles of others involved in the hand mixing process and in delivery within the workplace of raw and blended materials
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to hand mixing equipment, appropriate materials, formulae and production process to observe product produced in production line

Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting hand mixing operations in order to maintain production line output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Hand lay up composites PMB PROD47 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the hand layup of composites.

Element	Performance criteria
Identify the purpose and process stages for hand layup	$ Purpose of the composite production process is identified $ Changes in materials are identified at each stage of the hand layup process $ Equipment and components used for each stage are identified $ Characteristics of the product produced are identified in relation to the impact of the process on product quality $ Stages in process are compared with the quality requirements for the product
Preplan hand layup operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials preparation, hand layup process and for the downstream operations are identified $ Materials are identified including base raw materials, required additives and catalysts $ Hazards connected with materials and process are identified from observation of workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments and housekeeping
Hand lay up composites	$ Layup operations are monitored noting product quality, colour, thickness, product integrity $ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment cleanup, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Layup process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Hand lay up composite
Range of variables	

This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the hand layup of composites, maintaining personal safety and the safety of others within the context of required production output and product quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of equipment and the materials used
	$ describe faults and impact on product quality of faults in composites including uneven catalyst mixing, gel-coat faults, fibre dispersion, mat thickness, inadequate reinforcing coating
	$ describe changes to materials at the stages of production conducted by the employee
	$ identify and describe own role and the roles of others involved directly in the hand layup process
	$ identify faults in surface finishes, contamination and product thickness and integrity which would effect required customer use of the fibre glass product and identify means to rectify faults
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor operations and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials: read relevant safety information and apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Composite materials, work area, operating procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting hand

	layup in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Prepare surfaces for coating PMB PROD48 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to prepare surfaces for application of surface coatings and finishes by hand or machine.

Element	Performance criteria
Identify methods, equipment and materials used for surface preparation	$ Characteristics of substrate and the required surface coating materials are identified $ Workplace instructions on surface preparation for the materials are read and features of the process are identified $ Sources of contamination in work area are identified and excluded $ Equipment required, related engineering controls and personal protection equipment are identified $ A work plan for preparation of the surface is devised based on equipment and materials requirements
Use appropriate methods, equipment and materials	$ The work plan checked for conformity to workplace procedures and compliance with occupational health and safety and materials requirements $ The plan is followed to prepare surfaces to specification
Ensure surfaces are adequately prepared	$ Surface preparation is checked for conformity with workplace requirements throughout the process $ Relevant testing methods are selected and used to ensure conformity with specifications $ Rectification of surface preparation faults are made as required $ Defects are dealt with and reported in accordance with workplace procedures

UNIT	Prepare surfaces for coating
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	The surface preparation process is conducted as part of production activities with the operator using discretion and judgement within established work procedures.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ explain effects of contamination on product quality
	$ use appropriate surface preparation equipment and consumables
	$ prepare surface to specifications
	$ locate, interpret and apply relevant information
	$ maintain workplace records$ identify and safely handle products and materials and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.
Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function: $ use of engineering controls and other strategies to reduce contamination of surfaces during and after preparation

	$ strategies of hierarchy of control to manage risk to self and others through the surface preparation operations
	$ production workflow and the impact of surface preparation on the finished product quality
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Surface coating equipment and consumables, surfaces for coating, job specifications
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows surfaces are prepared to specifications, faults in prior processes detected and reported, work area clean and well maintained Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	2

UNIT	Hand application of surface coatings PMB PROD49 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply surface coatings by hand.

Element	Performance criteria
Identify surface coating products and equipment	$ Equipment, accessories and consumables are identified for the surface coating task(s) $ Materials Safety Data Sheets and/or product application and safety information are read and used to inform work practices $ Particular process techniques, time and safety requirements are noted and used to inform work planning
Check surface preparation	$ The implications of correct surface preparation on product quality are known and explained $ Surfaces are checked for contamination and suitable preparation $ Products with surface or other faults are identified and action is taken within workplace procedures to rectify fault or recycle materials as appropriate
Clean equipment and rectify faults	$ Hand application equipment is cleaned $ Trial applications of surface materials are made to check equipment operation, materials consistency and specified surface finish $ Application equipment faults are identified and rectified $ Material faults are identified and work place procedures for rectification are followed
Apply surface coating	$ Sequence of work is identified maximising potential of the applied finish for the production operation $ Equipment and accessories are used within Manufacturer=s and workplace instructions $ Surfaces are kept free of contamination $ Surface coating depth and coverage is checked for conformity with specifications
Clean work area and prepare products for the next process	$ Equipment used is cleaned and inspected for serviceable condition and stored appropriately $ Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed $ Coated products are inspected and approved for suitability for further processing $ Products which do not meet quality specifications are re coated or tagged for further investigation $ Workplace records are completed $ Work area is cleaned and returned to approved condition

UNIT	Hand application of surface coatings
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	The coating process is conducted as part of production activities with the operator using discretion and judgement within established specifications.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select and apply surface coatings
	$ maintain application equipment
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ effects of the fumes, heat and other radiations
	$ characteristics of the coating or base materials in terms of toxicity, reactivity, flammability, required viscosity and recoatability
	$ knowledge of the methods to prevent contamination of surfaces during and after surface coating
	$ effective and efficient use of materials equipment and consumables
	$ relationship of the surface coating operations to production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Hand surface coating application equipment, coatings and materials to be coated
Consistency in performance may include	Establishes effective working relationships with colleagues Work consistently shows application of coatings to specifications Work area and equipment is clean and well maintained Modifies activities to cater for variations in workplace contexts and environment Waste is minimised Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies						
Collect,	Commu-nicate	Plan &	Work with	Use	Solve	Use

analyse & organise information	ideas & information	organise activities	others & in teams	mathemati-cal ideas & techniques	problems	technology
2	2	2	2	2	2	2

UNIT	Spray gun application of surface coatings PMB PROD50 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to use spray guns to apply surface coatings.

Element	Performance criteria
Identify surface coating products and equipment	$ Equipment, accessories and consumables are identified for the surface coating task(s) $ Materials safety data sheets and/or product application and safety information are read and used to inform work practices $ Particular process techniques, time and safety requirements are noted and used to inform work planning
Check surface preparation	$ The implications of correct surface preparation on product quality are known and explained $ Surfaces are checked for contamination and suitable preparation $ Products with surface or other faults are identified and action is taken within workplace procedures to rectify fault or recycle materials as appropriate
Dismantle, clean and reassemble spray guns	$ Spray guns are dismantled and cleaned $ Component operation is checked for conformity with specifications $ Unserviceable components are replaced and spray gun reassembled
Identify and rectify spray gun faults	$ Trial applications of surface materials are made to check spray patterns, equipment operation, materials consistency and specified surface finish $ Spray gun faults are identified and rectified $ Material faults are identified and work place procedures for rectification are followed
Apply surface coating	$ Sequence of work is identified maximising potential of the applied finish for the production operation $ Equipment and accessories are used within manufacturer=s and workplace instructions $ Surfaces are kept free of contamination $ Surface coating depth and coverage is checked for conformity with specifications
Clean work area and prepare products for the next process	$ Equipment used is cleaned and inspected for serviceable condition and stored appropriately $ Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed $ Coated products are inspected and approved for suitability for further processing $ Products which do not meet quality specifications are re coated or tagged for further investigation $ Workplace records are completed $ Work area is cleaned and returned to approved condition

UNIT	Spray gun application of surface coatings
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	The coating process is conducted as part of production activities with the operator using

	discretion and judgement within established specifications.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select and apply surface coatings
	$ adjust spray equipment to effect required spray pattern
	$ maintain spray equipment
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ effects of the fumes, heat and other radiations on surface coatings
	$ characteristics of the coatings and base materials in terms of toxicity, reactivity, flammability, required viscosity and recoatability
	$ knowledge of the methods to prevent contamination of surfaces during and after surface coating
	$ application of relevant hydraulic, mechanical and pneumatic principles to the spray process
	$ effective and efficient use of materials equipment and consumables
	$ relationship of the surface coating operations to production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Spray equipment, coatings and coating products
Consistency in performance may include	Establishes effective working relationships with colleagues Work consistently shows application of coatings to specifications Work area and equipment is clean and well maintained Modifies activities to cater for variations in workplace contexts and environment Waste is minimised Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	2

UNIT	Immersion application of surface coatings PMB PROD51 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply surface coatings by immersion.

Element	Performance criteria
Identify surface coating products and equipment	$ Equipment, accessories and consumables are identified for the surface coating task(s) $ Materials safety data sheets and/or product application and safety information are read and used to inform work practices $ Particular process techniques, time and safety requirements are noted and used to inform work planning
Check surface preparation	$ The implications of correct surface preparation on product quality are known and explained $ Surfaces are checked for contamination and suitable preparation $ Products with surface or other faults are identified and action is taken within workplace procedures to rectify fault or recycle materials as appropriate
Identify and rectify immersion coating faults	$ Trial applications of surface materials are made to check equipment operation, materials consistency and specified surface finish $ Equipment faults are identified and rectified within workplace procedures $ Material faults are identified and work place procedures for rectification are followed
Apply surface coating	$ Sequence of work is identified maximising potential of the applied finish for the production operation $ Equipment and accessories are used within Manufacturer=s and workplace instructions $ Surfaces are kept free of contamination $ Surface coating depth and coverage is checked for conformity with specifications
Clean work area and prepare products for the next process	$ Equipment used is cleaned and inspected for serviceable condition and stored appropriately $ Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed $ Coated products are inspected and approved for suitability for further processing $ Products which do not meet quality specifications are re coated or tagged for further investigation $ Workplace records are completed $ Work area is cleaned and returned to approved condition

UNIT	Immersion application of surface coatings
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	The coating process is conducted as part of production activities with the operator using discretion and judgement within established specifications.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select and apply surface coatings
	$ maintain equipment within workplace procedures
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ effects of the fumes, heat and other radiations on surface coatings
	$ characteristics of the coatings and base materials in terms of toxicity, reactivity, flammability, required viscosity and recoatability
	$ knowledge of the methods to prevent contamination of surfaces during and after surface coating
	$ effective and efficient use of materials equipment and consumables
	$ relationship of the surface coating operations to production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Immersion coating equipment, coatings and coating products
Consistency in performance may include	Establishes effective working relationships with colleagues Work consistently shows application of coatings to specifications Work area and equipment is clean and well maintained Modifies activities to cater for variations in workplace contexts and environment Waste is minimised Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.
Key competencies	

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	2

UNIT	Conduct compounding operations PMB PROD52 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to compounding operations.

Element	Performance criteria
Identify the purpose and operations of compounding equipment	$ Purpose of the compounding process is identified $ Changes in materials are identified at each stage of the process $ Equipment and components used in the blender are identified $ Characteristics of the blended material produced are identified in relation to impact on the production process and product quality $ Stages in the compounding process are compared with the quality requirements for the product $ Appropriate indicators on control panels are located and the purpose of each is identified
Preplan compounding operations	$ Work requirements are identified from approved operating procedures $ Equipment and processes used for materials measurement, preparation, compounding process and for the delivery of material to store or production area are identified $ Operating principles of the compounding operations equipment and components are identified $ Materials are identified including base raw materials and additives $ Hazards connected with materials and process are identified from observation of the blender feed and product delivery equipment and from workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - formulae - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the compounding process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Check compounder setup	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Process settings and adjustments including formulae settings heat and speed are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to compounding operations in accordance with workplace procedures
Monitor compounding operations	$ Compounding operations are monitored noting materials quantity, product quality, equipment operating temperatures, speed, amperages, pressures, viscosity and time $ Adjustments are made to remedy faults and non-conformity to product blend standards where applicable

	$ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment cleanup, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Compounding process is monitored and conditions which may effect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Conduct compounding operations
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving compounding operations. $ Operator function involves monitoring raw materials input, monitoring mixing, maintaining personal safety and the safety of others within the context of required formulae, product output and quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of compounding equipment, machine components and the materials used
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of compounding machine speed, pressure, time, temperature, on finished product quality, production process and output$ identify the role friction plays in the compounding of product
	$ describe causes and effects of variations in blended batches
	$ calculate volumes from formulae and identify volumes of mixing areas and hoppers
	$ identify and describe own role and the roles of others involved in the compounding process and in delivery within the workplace of raw and blended materials
	$ explain the effect of unauthorised or emergency shut down of equipment on the compounding process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and*

	process knowledge to complete work operations.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the Compounding equipment operation and product compounding
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ purpose of developing elasticity and controlling temperatures
	$ effects of mastication, differential speed, overheating,
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to compounding equipment, appropriate materials formulae and production process to observe product produced in production line
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environmentWork consistently shows evidence of following logical work sequences in conducting compounding in order to maintain production line output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Operate an internal mill blender PMB PROD53 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of internal mill blenders.

Element	Performance criteria
Identify the purpose and operations of internal mill blenders	$ Purpose of the internal mill blending process is identified $ Changes in materials are identified at each stage of the process $ Equipment and components used in the blender are identified $ Characteristics of the blended material are identified in relation to the impact on the production process and final product quality $ Stages in the blending process are compared with the quality requirements for the product $ Appropriate indicators on control panels are located and the purpose of each is identified
Preplan blending operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials measurement, preparation, blending process and for the delivery of material to store or production area are identified $ Operating principles of the internal mill blender equipment and components are identified $ Materials are identified including base raw materials and additives $ Hazards connected with materials and process are identified from observation of the blender feed and product delivery equipment and from workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the blending process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Check internal blender setup	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Process settings and adjustments including formulae settings heat and speed are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to blending operations in accordance with workplace procedures
Monitor internal mill blender operation	$ Internal mill blender operations are monitored noting materials quantity, product quality, equipment operating temperatures, speed, amperages, pressures, viscosity and time $ Adjustments are made to remedy faults and non-conformity to product blend standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is

	dealt with in accordance with workplace procedures $ Equipment cleanup, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Internal mill blending process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Operate an internal mill blender
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of internal mill blenders including a Shaw Intermix and a Banbury Mixer. $ Operator function involves monitoring raw materials input, monitoring mixing, maintaining personal safety and the safety of others within the context of required formulae, product output and quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of internal mill blender equipment, machine components and the materials used
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of Internal mill blender machine speed, pressure, time, temperature, on finished product quality, production process and output$ identify the role friction plays in the blending of product
	$ describe causes and effects of variations in blended batches
	$ calculate volumes from formulae and identify volumes of mixing areas and hoppers
	$ identify and describe own role and the roles of others involved in the internal mill blender process and in delivery within the workplace of raw and blended materials
	$ explain the effect of unauthorised or emergency shut down of equipment on the internal mill blender process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process*

	knowledge to complete work operations.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the Internal Mill Blender equipment operation and product blending
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ purpose of developing elasticity and controlling temperatures
	$ effects of mastication, differential speed, overheating,
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to internal mill blender, appropriate materials formulae and production process to observe product produced in production line
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting internal mill blending operations in order to maintain production line output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Operate an open mill blender PMB PROD54 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of open mill blenders.

Element	Performance criteria
Identify the purpose and operations of open mill blenders	$ Purpose of the open mill blending process is identified $ Changes in materials are identified at each stage of the process $ Equipment and components used in the blender are identified $ Characteristics of the material produced are identified in relation to the impact on the production process and final product quality $ Stages in the blending process are compared with the quality requirements for the product $ Appropriate indicators on control panels are located and the purpose of each is identified
Preplan blending operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials measurement, preparation, blending process and for the delivery of material to store or production area are identified $ Operating principles of the open mill blender equipment and components are identified $ Materials are identified including base raw materials and additives $ Hazards connected with materials and process are identified from observation of the blender feed and product delivery equipment and from workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the blending process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Check internal blender setup	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Process settings and adjustments including formulae settings heat and speed are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to blending operations in accordance with workplace procedures
Monitor open mill blender operation	$ Open mill blender operations are monitored noting materials quantity, product quality, equipment operating temperatures, speed, amperages, pressures, viscosity and time $ Adjustments are made to remedy faults and non-conformity to product blend standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures

	$ Equipment cleanup, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Open mill blending process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Operate an open mill blender
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of open mill blenders. $ Operator function involves monitoring raw materials input, monitoring mixing, maintaining personal safety and the safety of others within the context of required formulae, product output and quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of open mill blender equipment, machine components and the materials used
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of open mill blender machine speed, pressure, time, temperature, on finished product quality, production process and output
	$ identify the role friction plays in the blending of product$ describe causes and effects of variations in blended batches
	$ calculate volumes from formulae and identify volumes of mixing areas and hoppers
	$ identify and describe own role and the roles of others involved in the open mill blender process and in delivery within the workplace of raw and blended materials
	$ explain the effect of unauthorised or emergency shut down of equipment on the open mill blender process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations*.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the Open Mill Blender equipment operation and product blending
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ purpose of developing elasticity and controlling temperatures
	$ effects of mastication, differential speed, overheating,
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to open mill blender, appropriate materials formulae and production process to observe product produced in production line
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting open mill blending operations in order to maintain production line output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Run high speed mixing equipment PMB PROD55 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of high speed mixers.

Element	Performance criteria
Identify the purpose and operations of high speed mixers	$ Purpose of the high speed mixing process is identified $ Changes in materials are identified at each stage of mixing process $ Equipment and components used in the mixer are identified $ Characteristics of the mixed material produced are identified in relation to the impact on the production process and final product quality $ Stages in the mixing process are compared with the quality requirements for the product $ Appropriate indicators on control panels are located and the purpose of each is identified
Preplan mixing operations	$ Work requirements are identified from workplace approved operating procedures $ Equipment and processes used for materials measurement, preparation, mixing process and for the delivery of material to store or production area are identified $ Operating principles of the high speed mixer equipment and components are identified $ Materials are identified including base raw materials and additives $ Hazards connected with materials and process are identified from observation of the mixer feed and product delivery equipment and from workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - materials inputs and outputs - ancillary supplies and equipment - product quality requirements for the relevant process stage(s) are identified and noted $ Emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the mixing process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Check high speed mixer setup	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Process settings and adjustments including formulae settings, heat and speed are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to mixing operations in accordance with workplace procedures
Monitor high speed mixer operation	$ High speed mixer operations are monitored noting materials quantity, product quality, equipment operating temperatures, speed, amperages, pressures, viscosity and time $ Adjustments are made to remedy faults and non-conformity to product mixing standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures

	$ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Mixing process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run high speed mixing equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of high speed mixing machines. $ Operator function involves monitoring raw materials input, monitoring mixing, maintaining personal safety and the safety of others within the context of required formulae, product output and quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of high speed mixing equipment, machine components and the materials used
	$ describe changes to materials at the stages of production conducted by the employee
	$ explain the impact of high speed mixer machine speed, time, temperature, on finished product quality, production process and output$ identify the role friction plays in the mixing of product
	$ describe causes and effects of variations in mixed batches
	$ calculate volumes from formulae and identify volumes of mixing areas and hoppers
	$ identify and describe own role and the roles of others involved in the high speed mixing process and in delivery within the workplace of raw and mixed materials
	$ explain the effect of unauthorised or emergency shut down of equipment on the high speed mixer process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the high speed mixing equipment operation and product mixing
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ purpose of developing elasticity and controlling temperatures
	$ effects of mastication, differential speed, overheating,
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to high speed mixer, appropriate materials formulae and production process to observe product produced in production line
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting high speed mixing operations in order to maintain production line output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Construct moulds for composites PMB PROD56 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to construct composites moulds as support to manufacturing processes.

Element	Performance criteria
Identify the purpose of the composites mould	$ Purpose of the composites mould is established $ Performance requirements of the composites mould are identified $ Proposed service life of composites mould is established
Plan composites mould construction	$ Plan of proposed composites mould is produced $ Approval of design is gained through workplace procedures $ Steps or stages in production are planned, noting check points for measurements and tests $ Suitable worksite is located
Identify suitable materials and equipment	$ Composites mould materials are chosen in accordance with performance requirements, length of proposed service, cost and availability $ Equipment suitable for working the chosen material is assembled
Collect materials and equipment	$ Consumables are assembled ready for use $ (Any) special equipment required is procured $ Sufficient materials to complete the project are ordered
Construct the composites mould	$ Production plan is followed to construct the composites mould $ Checks are conducted at the identified points $ Modifications are identified and recommended within workplace procedures $ Modifications to the plan are documented and followed $ Composites mould is checked for fitness for purpose

UNIT	Construct moulds for composites
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Work involves planning, selection and working of materials and checking of performance of composites mould.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ plan tasks
	$ select and work materials
	$ check own work$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. including *Prepare surfaces for coating* and *Hand application of surface coatings*.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ materials behaviour
	$ requirements for cutting, shaping and joining materials
	$ production workflow
	$ focus of operation of work systems and equipment
	$ application of relevant agreements, codes of practice or other legislative requirements
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Job context, materials and equipment for composites mould construction
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	2	3	3	2	3	2

UNIT	Construct jigs and fixtures PMB PROD57 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to construct jigs and fixtures as support to manufacturing processes.

Element	Performance criteria
Identify the purpose of the jig or fixture	$ Purpose of the jig or fixture is established $ Performance requirements of the jig or fixture are identified $ Proposed service life of jig or fixture is established
Plan jig or fixture construction	$ Plan of proposed jig or fixture is produced $ Approval of design is gained through workplace procedures $ Steps or stages in production are planned, noting check points for measurements and tests $ Suitable worksite is located
Identify suitable materials and equipment	$ Jig or fixture materials are chosen in accordance with performance requirements, length of proposed service, cost and availability $ Equipment suitable for working the chosen material is assembled
Collect materials and equipment	$ Consumables are assembled ready for use $ (Any) special equipment required is procured $ Sufficient materials to complete the project are ordered
Construct the jig or fixture	$ Production plan is followed to construct the jig or fixture $ Checks are conducted at the identified points $ Modifications are identified and recommended within workplace procedures $ Modifications to the plan are documented and followed $ Jig or fixture is checked for fitness for purpose

UNIT	Construct jigs and fixtures
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Work involves planning, selection and working of materials and checking of performance of jig or fixture.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ plan tasks
	$ select and work materials
	$ check own work
	$ locate, interpret and apply relevant information$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ materials behaviour
	$ requirements for cutting, shaping and joining materials
	$ production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Job context, materials and equipment for jig or fixture construction
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	2	3	3	2	3	2

UNIT	Develop patterns PMB PROD58 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to develop patterns for production processes from workplace drawings.

Element	Performance criteria
Dimensions of finished patterns are determined	$ Customer orders are interpreted to establish required size(s) of finished products $ Size requirements are checked in relation to the production process and finishing capacity of the workplace
Plan process	$ Material for pattern is identified for approximate size and characteristics $ Required instruments and equipment are identified, located and assembled $ Drawings and related specifications are interpreted $ Procedures for using pattern development instruments and tools are checked and equipment is prepared for use
Plot dimensions	$ Equipment and tools are used following normal workplace procedures $ Each dimension is measured, exploded and plotted maintaining appropriate angles, arcs and curves $ Visual inspection and measurements are used to compare pattern dimensions and shapes with drawings and specifications
Complete pattern	$ Pattern is completed ensuring that the pattern indicates completion date and original drawing details $ Required workplace approval of pattern is obtained $ Plans are marked with notations for workplace requirements including authorship, process or customer requirements, authorisation and any review dates $ Plans are copied and filed as required according to workplace policies and procedures

UNIT	Develop patterns
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Work involves the development of patterns from drawings by hand or using drafting equipment or CAD computer programming.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ interpret drawings and extrapolate to physical dimensions$ select appropriate mediums and materials
	$ identify product, materials and work processes appropriate for the individual work role
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle relevant equipment, substances, other products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role., particularly *production preparation, production support* and *computing* units

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ production process for manufacturing/fabricating the pattern to a product
	$ focus of operation of work systems and equipment
	$ application of relevant agreements, codes of practice and legislative requirements
	$ identification and correct use of personally used workplace equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Drawings, job specifications, tools and equipment, information on production/fabrication process and may require relevant computer equipment and software
Consistency in performance may include	Establishes effective working relationships with colleagues Identifies and adapts to workplace objectives, cultures, products, customers and services Modifies activities to cater for variations in workplace contexts and environment Action taken promptly - accidents and incidents reported within regulatory requirements and following workplace procedures Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in an workplace simulated facility with relevant process equipment, simulated job orders, work instructions and deadlines.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	3	3	3

UNIT	Run granulating equipment PMB PROD59 A
FIELD	Production
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the operation of granulating equipment.

Element	Performance criteria
Identify the purpose and process stages for granulating	$ Purpose of granulating process is identified $ Changes in materials are identified at each stage of the granulating process $ Equipment and components used for each stage are identified $ Stages in granulating are compared with the quality requirements for the product
Preplan granulator operations	$ Work requirements are identified from workplace approved operating procedures $ Operating principles of granulating equipment and components are identified $ Materials are identified including base raw materials and required additives $ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking

	- materials inputs and outputs - ancillary supplies and equipment are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Check granulator setup	$ Equipment information, required quality specifications and standard operating procedures are identified` $ Granulator settings and adjustments are checked for conformity to documented procedures $ Materials are checked for conformity with workplace operational requirements $ Non-conforming materials are discarded or adjustments made to processing operations in accordance with workplace procedures
Monitor granulator operation	$ Granulator operations are monitored noting product quality, production outputs and equipment operating speed $ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment cleanup, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Respond to product quality improvement requests	$ Granulator process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Run granulating equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of granulating equipment, monitoring production, maintaining personal safety and the safety of others within the context of required production output and product quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	
Critical aspects of evidence to be	Assessment must confirm appropriate knowledge and skills to: $ identify the function of granulating equipment, machine components and the materials

considered	used
	$ describe changes to materials at the stages of process conducted by the employee
	$ explain the impact of granulating machine speed on product quality and production output
	$ identify and describe own role and the roles of others involved directly in the granulating process
	$ explain the effect of unauthorised or emergency shut down of equipment on the granulating process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials: read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit: *Apply materials and process knowledge to complete work operations*. The unit *Collect waste for recycling or safe disposal* is a prerequisite to and may be assessed in conjunction with this unit.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the granulating equipment operation
	$ the impact that chemical reactions/mechanical processes have on changing the state, form and condition of the materials
	$ production workflow schedule requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Granulating equipment and materials for processing
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows evidence of following logical work sequences in conducting granulator operations in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology

1	1	1	2	1	1	1

UNIT	Finish products for customer use PMB FINISH01 A
FIELD	Finish products
DESCRIPTION	This unit applies to employees required to prepare products for customers and involves the application of knowledge of the materials and the purpose of the product.

Element	Performance criteria
Establish requirements for the finishing process	$ Specifications and work requirements are identified $ Equipment and consumables for the finishing process are assembled $ Workplace procedures and materials safety data sheets are consulted and used to inform the work planning process
Check quality of product	$ Products are inspected to identify routine and non-routine finishing requirements $ Recommendations are made to appropriate personnel regarding any modifications required $ Non-conforming products are identified and processed in accordance with workplace procedures
Follow workplace procedures to finish product	$ Workplace procedures are applied to finishing processes $ Waste and recycling procedures are followed $ Finished products are inspected and compared to specifications $ Finished products are assembled and sorted in accordance with workplace procedures $ Appropriate documentation is completed

UNIT	Finish products for customer use
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	This unit involves the application of product and process knowledge to finishing goods for customer use.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select and apply appropriate finishing techniques and processes
	$ deal with waste and recycling following workplace procedures
	$ select and use appropriate hand tools and finishing processes
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ application of finishing techniques
	$ production workflow in relation to input rate and order requirements
	$ focus of operation of work systems and equipment

	$ identification and correct use of equipment, processes and procedures $ planning own work including predicting consequences and identifying improvements
Resource implications	Goods and equipment for finishing products
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Finished goods meet specification and quality requirements Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	1	2	1

UNIT	Fit attachments to products PMB FINISH02 A
FIELD	Finish products
DESCRIPTION	This unit applies to employees required to fit and adjust product fittings and attachments.

Element	Performance criteria
Identify products, fittings and attachments to be used	$ Products requiring assembly work and specifications for the work are identified $ Availability of attachments, any required materials and tools is identified $ Final use and any special characteristics of the product to be assembled are identified in relation to the impact of the assembly process on product quality
Plan process for fitting attachments to products	$ Hazards connected with materials and process are identified from observation of the equipment, workplace reference materials including materials safety data sheets and equipment instructions $ Appropriate measures are identified to minimise risks from the identified hazards $ Manufacturer=s information and safety advice on products used is located and used to plan work $ Attachment process is designed to conform to quality specifications, minimise time and economically use materials $ Task sequences are planned within scope of authority including identifying: - ongoing requirements for fittings and consumables, waste management and work area housekeeping requirements - times and locations in the fitting process where checks for product quality and conformity within specifications are most appropriately made - any required supplementary equipment for product quality testing or routine lubrication and adjustments $ Materials, tools and facilities including required jigs are assembled and checked for suitability for purpose
Complete fitting operations	$ Work plan is followed ensuring compliance with workplace procedures and occupational health and safety requirements $ Attachments, and where required the product, are tested for conformity with work quality requirements $ Potential faults and remedies are identified $ Results of any testing or identified product nonconformity is reported
Clean work area and prepare products for the next process	$ Completed product and any equipment used is cleaned and inspected for serviceable condition and stored appropriately $ Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed $ Completed products are inspected and approved for suitability for further processing or for customer delivery $ Products which do not meet quality specifications are completed or tagged for further processing or repair $ Work area is cleaned and returned to approved condition
Follow workplace procedures to finish product	$ Waste and recycling procedures are followed $ Assembled products are sorted for delivery to other work sections in accordance with workplace procedures $ Appropriate documentation is completed

UNIT	Fit attachments to products
Range of variables	

This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Work is conducted in accordance with workplace practices and consistent with manufacturer=s recommendations for equipment and materials used.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select and apply appropriate attachment techniques and processes
	$ deal with waste and recycling following workplace procedures
	$ select and use appropriate hand tools and materials
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ scope of authority of the position and the roles of others involved in the production and product finishing process
	$ effect of unauthorised or emergency shut down of equipment on the production process
	$ key checkpoints for product quality checks and monitoring of supplies and downstream operations
	$ factors which may influence product quality and production output and appropriate remedies
	$ production workflow and the relationship of the fitting process to the overall production effort
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to products and attachments, appropriate quality specifications and instructions
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Consistently checks product quality and fits up products to meet product quality standards Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	2

UNIT	Repair product imperfections PMB FINISH03 A
FIELD	Finish products
DESCRIPTION	This unit applies to employees required to repair product imperfections during or after production. *This unit will be designated for the relevant repair process.*

Element	Performance criteria
Identify damage and select materials and repair process	$ Product specifications and work order documentation are interpreted $ Product faults are identified and decisions are made as to the feasibility of the repair in terms of the intended use of the product and the quality specifications $ Technology appropriate for the repair is selected $ Appropriate repair materials are identified and matched to fault and repair method $ Materials, tools and facilities are assembled and checked for suitability for purpose $ Manufacturer=s information and safety advice on products used is located and used to plan work $ Order of work is planned to identify required work sequences, times, work process stages, engineering controls and personal protection equipment $ Repair is designed to conform to quality specification, minimise time and economically use consumable materials
Conduct repairs	$ Sources of contamination are identified and eliminated $ Surfaces are prepared in accordance with Manufacturer=s instructions and workplace requirements $ Repairs are conducted in the appropriate locations and are checked for conformity with job specification
Clean work area and prepare products for the next process	$ Equipment used is cleaned and inspected for serviceable condition and stored appropriately $ Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed $ Repaired products are inspected and approved for suitability for further processing or for customer delivery $ Products which do not meet quality specifications are repaired further or tagged for further treatment $ Work area is cleaned and returned to approved condition
Follow workplace procedures to finish product	$ Waste and recycling procedures are followed $ Repaired products are assembled and sorted for delivery to other work sections in accordance with workplace procedures $ Appropriate documentation is completed

UNIT	Repair product imperfections

Range of variables

This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity.

The common range of variables should be used to assist in planning assessment and training activities.

Job role context	Goods are repaired using a range of equipment excluding chemical or mechanical joining equipment and may be required to conform to relevant Australian Standards. *This unit will be designated for the relevant process.*

Evidence guide

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select and use repair methods and materials to minimise waste
	$ work efficiently and ensure repair processes result in undamaged goods
	$ identify special requirements of products and appropriately identify products
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ properties of materials and impact of repair processes in relation to final product integrity
	$ appropriate personal protection equipment and engineering controls appropriate to the repair process
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to packaging equipment, materials and goods to be packaged
Consistency in performance may include	Establishes effective working relationships with colleagues Consistently identifies appropriate products for repair and relevant repair methods Modifies activities to cater for variations in workplace contexts and environments Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	1	2	2	2

UNIT	Package goods PMB FINISH04 A
FIELD	Finish products
DESCRIPTION	This unit applies to employees required to pack, wrap and label goods for despatch or storage.

Element	Performance criteria
Select materials and pack & wrap products	$ Packaging specifications and order packaging documentation are interpreted $ Technology appropriate for the goods to be packed is selected $ Packaging materials are identified and matched to specifications $ Work is planned to meet: - occupational health and safety requirements - economical use of materials - loss minimisation & damage in transit or storage $ Completed packed goods are stacked to minimise damage from within and outside
Use labelling standards to label packaged products/loads	$ Workplace labelling standards are identified $ Appropriate goods handling, labelling and other identification symbols are utilised $ Invoices and picking slips are attached (where required) $ Workplace documentation is completed

UNIT	Package goods
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Goods are packaged using a range of equipment including shrink wrappers, tape machine labellers and other equipment.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select and use packaging materials to minimise waste
	$ work efficiently and ensure packaging results in undamaged goods
	$ identify special requirements of products and package appropriately
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ production workflow and requirements for packaging and despatch of product
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to packaging equipment, materials and goods to be packaged

Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
1	1	2	1	2	2	2

UNIT	Hand decorate products PMB FINISH05 A
FIELD	Finish products
DESCRIPTION	This unit applies to employees required to hand decorate products using paints, decals, transfers and other products. *This unit will be designated for the relevant hand decoration process.*

Element	Performance criteria
Prepare for hand decoration process	$ Customer order or workplace specification is checked against existing materials and equipment availability $ Products to be decorated are identified and inspected for suitability for requested process $ Materials, tools and facilities are assembled and checked for suitability for purpose $ Manufacturer=s information and safety advice on products used is located and used to plan work $ Order of work is planned to identify required work sequences, times, work process stages, engineering controls and personal protection equipment
Prepare surfaces	$ Sources of contamination are identified and eliminated $ Surfaces are prepared in accordance with Manufacturer=s instructions and workplace requirements
Hand decorate products	$ Required decorations are identified to meet job order requirements $ Decorations are applied in the appropriate locations and are checked for conformity with job specification
Clean work area and prepare products for the next process	$ Equipment used is cleaned and inspected for serviceable condition and stored appropriately $ Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed $ Decorated products are inspected and approved for suitability for further processing for customer delivery $ Products which do not meet quality specifications are re decorated or tagged for further treatment $ Workplace records are completed $ Work area is cleaned and returned to approved condition

UNIT	Hand decorate products
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	This unit requires the application of knowledge of the product requirements, decoration procedure and workplace quality requirements to complete operations to meet customer requirements.*This unit will be designated for the relevant process.*
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select decoration system to meet job specification
	$ apply decorations in correct locations meeting requirements for aesthetics and other quality

	parameters
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ effect of any fumes, heat or other radiations from decoration materials and processes on product and/or operator
	$ required specifications for decoration materials
	$ effective and efficient use of materials, equipment and consumables
	$ production workflow requirements in relation to product input and outputs to customers
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Products to be decorated, job specifications and decoration materials and equipment
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows application of decorations to specification Work area is clean and well maintained Waste is minimised Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	1	2	2	2

UNIT	Collect waste for recycling or safe disposal PMB WASTE01 A
FIELD	Waste disposal
DESCRIPTION	This unit applies to employees required to collect, sort and appropriately store waste for recycling or safe disposal.

Element	Performance criteria
Identify waste products	$ Waste products from the production process are identified in terms of the material type, toxicity, recyclability, flammability and reactivity $ Sources of waste and approved locations for storage of each waste type are identified
Relocate and store non-recyclable waste	$ Manual handling techniques appropriate for relocating waste are identified and employed

	$ Co-storing requirements for waste products are identified $ Storage inventory systems are updated
Sort and prepare materials for reuse	$ Materials are sorted and categorised for recycling process $ Preprocessing activities are identified to prepare products for re-use $ Materials are preprocessed and relocated for reuse
Complete waste processes	$ Reports on wastage are completed in accordance with workplace procedures $ Quantities of waste stored are monitored for compliance with workplace procedures

UNIT	Collect waste for recycling or safe disposal
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Waste water may contain acids, alkalies, solvents and/or solid matter $ Solid waste may include offcuts, trimmings, materials not to specification, first and end run materials. $ Wastes may be collected in sealed or open containers for removal by authorised waste disposal contractors. $ Preprocessing activities may include granulating, cleaning or chemical treatment.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify materials and appropriate recycling process
	$ store materials appropriately, based on regulatory advice
	$ pre-process materials
	$ locate, interpret and apply relevant information
	$ maintain workplace records$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ preprocessing operations
	$ recyclability of materials and associated benefits and risks
	$ storage and disposal requirements
	$ production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Materials for recycling and disposal, workplace procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Consistently employs appropriate procedures within the workplace context to deal with waste and recycling

	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	2

UNIT	Coordinate waste disposal PMB WASTE02 A
FIELD	Waste disposal
DESCRIPTION	This unit applies to employees required to develop and coordinate waste disposal procedures.

Element	Performance criteria
Identify requirements for waste and recyclable products	$ Waste products from the production process are identified in terms of the material type, toxicity, recyclability, flammability and reactivity $ Sources of waste and approved locations for storage of each waste type are identified based on regulatory requirements and workplace approved policies and procedures
Develop waste and recycling procedures	$ Requirements for handling, disposing or recycling waste are identified $ Storage and handling policies and procedures are developed $ Waste management procedures are published and posted in appropriate locations $ Contractors for disposal of waste are identified $ Arrangements are made to train relevant employees in required waste management procedures
Develop waste record systems	$ Data collection methods are instigated to record wastage rates $ Appropriate proformas are produced to record findings $ Reporting relationships are established among appropriate personnel and appropriate reports are completed

UNIT	Coordinate waste disposal
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Work involves the development and coordination of waste disposal and recycling procedures.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the properties of materials in terms of recycling and disposal
	$ apply storage and handling requirements to procedural statements
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ preprocessing operations
	$ recyclability of materials
	$ storage and disposal requirements
	$ production workflow and the related impact on waste levels
	$ focus of operation of work systems and equipment

	$ identification and correct use of equipment, processes and procedures $ planning own work including predicting consequences and identifying improvements
Resource implications	Manufacturing environment, materials for disposal or recycling, workplace procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Identifies appropriate handling, storage and recycling strategies Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	3	3	3

UNIT	Process orders and despatch products PMB HANDLE01 A
FIELD	Handling, storage and despatch
DESCRIPTION	This unit applies to employees required to process despatch orders, despatch stock and maintain records.

Element	Performance criteria
Analyse order to identify work requirements	$ Order request and consignment note documentation is interpreted $ Required schedules for despatch are identified $ Product(s) in order are identified $ Workplace and product knowledge is used to plan sequence of work $ Appropriate materials handling equipment is selected within required occupational health and safety regulations and timeframe for the despatch
Follow workplace processes to prepare goods for despatch	$ Workplace procedures for assembling and completing order are identified and read $ Goods for despatch are selected checking against product knowledge, labels and other identification systems $ Products are sorted, assembled and consolidated $ Orders secured and placed in storage areas, in accordance with schedule $ Order is checked against despatch schedule and order form
Despatch product following workplace procedures and schedules	$ Workplace records are completed, labels and appropriate documentation attached $ Load labels and documentation is finally checked and loading organised $ Final check of load labels and documentation undertaken $ Transportation requirements are described to driver where appropriate

UNIT	Process orders and despatch products
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Work involves the application of product knowledge, inventory and ordering systems and workplace documentation to meet specific requests from customers. The extent of authority for this work is covered by standard operating procedures and workplace precedence. Efficient and safe handling of product and loss minimisation are important work requirements.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ provide customer/client service and work effectively with others
	$ follow dangerous goods regulations
	$ identify purpose of component parts of order forms
	$ manage own despatch operations
	$ identify products and relevant handling requirements
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials

	$ apply safety precautions appropriate to the task.
Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ order form purpose
	$ requirements for workplace documentation
	$ reporting process for missing or faulty products
	$ production workflow and impact of variations in stock on production and customer delivery
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to stock records system, goods despatch areas

Consistency in performance may include	Establishes effective working relationships with colleagues
	
	Modifies activities to cater for variations in workplace contexts and environment
	
	Orders promptly assembled and despatched
	
	Discrepancies in stocks are noted and promptly reported
	
	Shows evidence of application of relevant workplace procedures including:
	$ order checking
	$ safe handling of product
	
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on or off the job.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	3	2	2	2	2

UNIT	Load and unload goods PMB HANDLE02 A
FIELD	Handling, storage and despatch
DESCRIPTION	This unit applies to employees required to identify critical characteristics of loads and to safely load and unload in accordance with workplace requirements and relevant government regulations.

Element	Performance criteria
Load and unload goods	$ Load characteristics including weight, volume, shape, balance and dimensions are identified and taken into account when determining appropriate loading and unloading procedures $ Dangerous or hazardous goods are identified and handled in accordance with required procedures for dangerous or hazardous goods $ Loading demonstrates compliance with (any) loading regulations and workplace safety requirements $ Lifting aids and appliances are selected and used to aid loading procedures in compliance with workplace procedures and safety legislation $ Unloading activities are conducted in a safe and efficient manner taking into account suitable locations, stowage, safe use of equipment and the balance of the remaining load
Secure and protect load	$ Load is secured using the appropriate load restraints and protection equipment for different loads and carrying and storage conditions $ The load is protected in accordance with legal and workplace safety requirements $ The distribution of the load is checked to ensure that it is even, legal and within the safe working capacity
Complete documentation	$ The load is inspected and checked for security to travel. $ All required documentation for the goods is completed in accordance with company requirements.

UNIT	Load and unload goods
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Loads may be on pallets, packaged or unpackaged. $ Work involves application of the knowledge of load characteristics, transport requirements and workplace documentation to ensure safe, efficient and effective loading and unloading activities.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify load characteristics, dangerous or hazardous goods, manual handling equipment and practices
	$ safely load and unload goods following workplace procedures
	$ distribute and secure load for safe transport
	$ convey information in written and oral form
	$ locate, interpret and apply relevant information

	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ application of regulations and workplace policy
	$ appropriate use of manual handling techniques and equipment
	$ production workflow in relation to goods handling
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to loads to be loaded/unloaded, goods and appropriate spaces for loading and unloading operations
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Loads are packed/unpacked to make safe and effective use of available spaces Relocated material is restacked appropriate for the transport method, safe height, weight loading, size and crushability of the goods Goods receiving special handling and/or documentation are identified and appropriate procedures followed Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
1	1	2	1	2	2	2

UNIT	Shift materials safely by hand PMB HANDLE03 A
FIELD	Handling, storage and despatch
DESCRIPTION	This unit applies to employees who are required to shift loads by hand.

Element	Performance criteria
Assess risks arising from the relocation of the load	$ Products, goods or materials to be relocated are identified $ Weight, volume, shape, balance and dimensions are estimated/calculated $ Locations for storage are determined and potential routes to be followed identified $ Effect of load relocation on original load base is predicted $ Points of balance are estimated $ Required clearances compared to available space and adjustments made $ Effects of moving contents which may be loose, liquid, dangerous or hazardous are

	considered $ Potential risks in route(s) which may be followed are considered $ Risks to self are identified arising from the required lifting, load carrying, set down or movement of the goods $ Manual handling procedures for lifting, lowering and carrying, pushing and pulling are identified $ Team lifting processes are considered for application
Plan load relocation	$ Relocation of the load is planned consistent with the code of practice for manual handling $ Process for relocating load proposed including predicting and planning for potential difficulties $ Proposed process checked against code of practice and workplace procedures for compliance
Relocate load	$ Required actions of lifting, lowering and carrying, pulling and pushing are used $ Applications appropriate for team relocation of load are identified $ Team lifting tasks are coordinated $ Planned process and route are followed $ Relocated materials are set down without damage to goods, personnel or equipment and checked for stability $ Relocation is checked to see that it meets work requirements, with any variance(s) reported

UNIT	Shift materials safely by hand

Range of variables

This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity.

The common range of variables should be used to assist in planning assessment and training activities.

Job role context	$ loads to be shifted may be irregularly shaped, packaged or unpackaged, labelled or unlabelled. $ Work involves moving packages, loose goods, materials and products by lifting, pushing and pulling without injury to the operator or damage to the materials being moved.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ provide customer/client service and work effectively with others
	$ use appropriate techniques and body positioning when lifting, lowering and carrying, pulling and pushing and team lifting
	$ follow the designated work plan for the job
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.
Required knowledge and skills may	Display of the following knowledge and skills in terms of job role or function: $ identification of manual handling risks, the load on the spine, controlled actions on a

include	movements, rotation and side movement of the spine, postures and positions, work layout and loads weight, load type and position, frequency, distance and time
	$ estimation of size, shape and special requirements of load
	$ identification of any goods coding
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to loads to be shifted and others to assist in the load shifting process
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Goods are shifted with no damage to self, others or goods Obtains assistance from other team members when required Recognises and adapts appropriately to cultural differences in the workplace including modes of behaviour and interaction among staff and others Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Use manual handling equipment for load shifting PMB HANDLE04 A
FIELD	Handling, storage and despatch
DESCRIPTION	This unit of competency applies to employees required to use mechanical aids in the shifting of loads.

Element	Performance criteria
Assess risks arising from the relocation of the load	$ Products, goods or materials to be relocated are identified $ Characteristics of load in relation to weight, shape, balance and dimensions are identified $ Appropriate strategies for shifting load are selected $ Location for storage is determined $ Routes to be followed are identified $ Points of balance estimated $ Effect of moving contents which may be loose, liquid, dangerous or hazardous are considered $ Potential risks in route(s) which may be followed are considered $ Lifting equipment to minimise potential risks is identified
Plan load relocation	$ Load shifting equipment selected $ Safe procedures for using lifting equipment identified, including the calculation of S.W.L. (safe working load) and/or WLL (working load limit) $ Process for relocating load proposed predicting and planning for potential difficulties $ Proposed process checked against relevant code of practice and workplace procedures for compliance $ Lifting equipment and accessories are checked for safe operation in accordance with manufactures instructions and company procedures
Relocate Load	$ Any unsafe equipment is reported to appropriate personnel $ Planned process and route are followed using equipment within necessary range of limitations $ Relocated materials are set down without damage to goods, personnel or equipment and checked for stability $ Relocation is checked to see that it meets work requirements, any variances are reported $ Equipment is returned to storage area

UNIT	Use manual handling equipment for load shifting
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Work involves the application of knowledge of the load characteristics, operational capabilities of the shifting equipment and (any) hazards associated with the work.Equipment may include pallet trucks, trolleys, dollies, wheelbarrows.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ use manual handling equipment to shift loads
	$ identify manual handling risks to self, others and equipment

	$ calculate load limits
	$ estimate effect of load and operating limitations of equipment
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ identification and safe use of mechanised materials handling equipment relevant to the workplace
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Range of manual handling equipment and goods to be shifted
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Obtains assistance from other team members when required Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	1	2	2	2

UNIT	Transfer loads with slings PMB HANDLE05 A
FIELD	Handling, storage and despatch
DESCRIPTION	This unit covers the preparations and conduct necessary for transferring goods using cranes and gantries.

Element	Performance criteria
Prepare for transfer of goods	$ Working area is prepared and maintained in accordance with national safety codes and workplace operating procedures $ Load characteristics including weight, volume, shape, balance, crushability and dimensions are identified $ Pulleys and blocks and tackle are checked for safe operation and load capacity $ Rope, cable, net and chain systems are checked prior to use for safe condition and conformity to specifications $ Tests of ropes, cable, net and chain systems are conducted when required to ensure safe operating capacity
Calculate safe working load (SWL) or working load limit (WLL) of slings and loads	$ Safe working load (SWL) or working load limit (WLL) is calculated using standardised formulae for different types of lifting cables $ Lifting equipment is checked to determine the safe working load $ Sling material is checked for conformity with equipment and safety requirements
Sling goods and unsling goods	$ Goods are slung/unslung in accordance with national safety codes and workplace operating procedures $ Correct securing devices are identified and used $ When required, load is steadied by tag lines $ Slinging attachments are released from load ensuring no injury to personnel or damage to machinery or goods
Strap and unstrap goods	$ Goods are strapped and unstrapped in accordance with national safety codes and workplace operating procedures $ Mechanical strapping equipment is used in accordance with manufacturer's instructions $ Damaged goods are identified and reported in accordance with company reporting procedures $ Strapping arrangements are secured/released to/from load ensuring no injury to personnel or damage to machinery or goods

UNIT	Transfer loads with slings

Range of variables

This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity.

The common range of variables should be used to assist in planning assessment and training activities.

Job role context	$ Work involves the application of the knowledge of the nature of the load to be shifted, safety precautions required and the capacity of load shifting equipment and the relevant support structures. $ Information required may include the relevant Worksafe Australia Guidelines standards for craneage operations.

Evidence guide

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify appropriate points for locations of slings
	$ sling goods safely and set down without damage
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ requirements for safe working load (SWL) or working load limit (WLL)
	$ production workflow and consequent requirements for load shifting
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Range of lifting slings, ropes, cables and nets

Consistency in performance may include	Establishes effective working relationships with colleagues
	
	Modifies activities to cater for variations in workplace contexts and environment
	
	Shows evidence of application of relevant workplace procedures including:
	$ hazard policies and procedures including codes of practice
	$ relevant guidelines relating to the safe use of machinery and equipment including the tagging of unserviceable or damaged items
	
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on or off the job. within the context of the legislative regulatory licensing requirements.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	2

UNIT	Operate forklifts for load shifting PMB HANDLE06 A
FIELD	Handling, storage and despatch
DESCRIPTION	This unit applies to employees required to operate a forklift safely, including systematic and efficient control of all vehicle functions and effective management of hazardous situations.

Element	Performance criteria
Plan work for the current working conditions	$ Traffic flow and work area conditions are constantly assessed and anticipated to allow safe operation to ensure no injury to people, or damage to equipment, loads or facilities $ Characteristics of the load are taken into account to ensure that where applicable, appropriate attachments are used to transport the load

	$ Any occurrences in the work area that may affect the safety and efficiency of operations are reported to the appropriate personnel
Select type of forklift and accessories for required load shifting task	$ Situations requiring special equipment or attachments are identified to match load and work characteristics including size, shape, weight and balance $ Appropriate specialised equipment is selected $ Existing attachments removed and stored according to workplace procedures $ Specialised equipment is fitted according to manufacturer=s instructions and workplace procedures $ Designated staff notified regarding specialist operations
Check forklift condition	$ Condition of forklift is checked for compliance with enterprise requirements for warning devices, operation to specifications and the nature of the load shifting exercise $ Attachments are checked to ensure appropriate adjustment and operation $ Mirrors and seats are adjusted for safe operation by the driver $ Logs are checked and appropriate workplace documentation completed
Drive the forklift	$ Forklift is started, steered, manoeuvred, positioned and stopped in accordance with traffic regulations and manufacturers instructions $ Forklift is parked, shutdown and secured in accordance with manufacturer=s specifications, traffic regulations and workplace procedures $ Instruments and gauges are monitored during start-up and operations to ensure that operation is within manufacturer's specifications and enterprise safety requirements $ Engine power is managed for efficiency of equipment movement and economy of equipment operations $ Driving hazards are identified and/or anticipated $ Hazards are avoided or controlled through defensive driving $ Forklift is driven in reverse, maintaining visibility and achieving accurate positioning $ Equipment operations are conducted within manufacturer's specified torque range$ Any faults or damage to equipment are immediately reported to the appropriate personnel
Operate a forklift to handle loads	$ The lifting task to be undertaken is appropriately planned and the correct lifting truck and attachments are selected $ The load is lifted, carried, lowered and set down in accordance with occupational health and safety legislation, manufacturer=s specifications and company procedures
Monitor site conditions	$ When selecting the most efficient route, hazards and traffic flow are identified and appropriate adjustments made $ Site conditions are assessed to enable safe operations and to ensure no injury to people or damage to property, equipment, loads or facilities occurs
Monitor and maintain forklift performance	$ Performance and efficiency of vehicle operation is monitored during use $ Defective or irregular performance and malfunctions are reported in accordance with workplace policies and procedures $ Forklift records are maintained/updated in accordance with workplace procedures and legislative requirements

UNIT	Operate forklifts for load shifting

Range of variables

This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity.

The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Forklift operations include counterbalance trucks, reach trucks, pallet trucks and straddle trucks. $ Equipment may be used for handling stock, materials or production. $ Operational checks are made at the commencement of all equipment operations according to workplace practices and consistent with manufacturer=s recommendations. $ Attachments may include: - spikes - drum carriers - bale carriers - tines - personnel carriers - side lifters. - high reaching - pantograph - jibs - paper clamps - hooks $ Sources of information include Australian Standard 2359 - Industrial Truck Code.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ locate, interpret and apply relevant information
	$ maintain workplace records$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task
	$ drive defensively
	$ manage forklift controls, read instruments and adjust engine power to site requirements
	$ drive safely in workplace environment
	$ meet, as a minimum, requirements of (any) relevant legislation
	$ use equipment appropriately
	$ shift loads safely.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ application of regulations and company operating procedures on forklift load shifting operation
	$ identification of points of balance and safe lifting positions on a range of loads
	$ production workflow in relation to shifting requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to forklifts, attachments where appropriate and load to be shifted
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Follows company and regulatory requirements for forklifts in all operations Loads safely and economically lifted, shifted and located without damage to equipment Relocated material is restacked appropriate for the transport method, safe height, weight loading, size and crushability of the goods

	Shows evidence of application of relevant workplace procedures including:
	$ hazard policies and procedures:
	- emergency, fire and accident procedures
	- the use of personal protective clothing and equipment conforming to industry standards according to the nature of the task
	- hazard identification
	$ relevant guidelines relating to the safe use of machinery and equipment including tagging of unserviceable or damaged items
	
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on or off the job. within the context of the legislative regulatory licensing requirements.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
1	1	2	1	2	2	2

UNIT	Use cranes and gantries to shift loads PMB HANDLE07 A
FIELD	Handling, storage and despatch
DESCRIPTION	This unit applies to employees required to move loads using cranes and gantries.

Element	Performance criteria
Assess risks arising from the relation of the load	$ Products, goods or materials to be relocated are identified $ Characteristics of load in relation to weight, shape, balance and dimensions are identified $ Appropriate strategies for shifting load are selected $ Location for storage is determined $ Routes to be followed are identified $ Points of balance estimated $ Effect of moving contents which may be loose, liquid, dangerous or hazardous are considered $ Potential risks in route(s) which may be followed are considered $ Lifting equipment to minimise potential risks is identified
Plan load relocation	$ Load shifting equipment selected $ Safe procedures for using lifting equipment identified, including the calculation of S.W.L. (safe working load) and/or WLL (working load limit) $ Process for relocating load proposed predicting and planning for potential difficulties $ Proposed process checked against relevant code of practice and potential difficulties $ Proposed process checked against relevant code of practice and workplace procedures for compliance $ Cranes, gantries and accessories are checked for safe operation in accordance with manufacturer=s instructions and company procedures
Relocate load	$ Any unsafe equipment is reported to appropriate personnel $ Planned process and route are followed using equipment within necessary range of limitations $ Relocated materials are set down without damage to goods, personnel or equipment and checked for stability $ Relocation is checked to see that it meets work requirements, any variances are reported $ Equipment is returned to storage area

UNIT	Use cranes and gantries to shift loads
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Work involves using cranes, gantries and lifting equipment to relocate loads. Licensing or certification requirements may apply through workplace procedures or legislative requirements.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select appropriate equipment including slings, ropes, chains or nets
	$ predict balance points and behaviour of suspended load
	$ estimate/calculate weights
	$ plan work and route to be taken
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ capacity of equipment in terms of SWL (safe working load) and/or WLL (working load limit)
	$ production workflow in relation to load shifting requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Load to be relocated, cranes and/or gantries

Consistency in performance may include	Establishes effective working relationships with colleagues
	
	Modifies activities to cater for variations in workplace contexts and environment
	
	Prediction of load behaviour when suspended
	
	Shows evidence of application of relevant workplace procedures including:
	$ sounding or posting of warning equipment
	$ hazard policies and procedures
	
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on or off the job. within the context of the legislative regulatory licensing requirements.

Key competencies						
Collect, analyse & organise	Commu-nicate ideas &	Plan & organise	Work with others & in	Use mathemati-cal ideas & techniques	Solve problems	Use technology

information	information	activities	teams			
2	2	2	2	2	2	2

UNIT	Store products PMB HANDLE08 A
FIELD	Handling, storage and despatch
DESCRIPTION	This unit applied to employees required to store products (raw or finished) for production or despatch.

Element	Performance criteria
Identify products to be stored and appropriate stock records/inventory systems	$ Products to be stored are identified for type, potential uses, possible hazards, frequency of use $ Size, shape and special storage requirements are determined $ Stock/inventory systems requirements are identified and relevant product information including quality specification located
Establish storage area	$ Storage area selected meets regulatory requirements for storing product type and quantity $ Appropriate workplace clearances for use of storage area are obtained $ Storage areas are cleared of waste and contaminants and appropriate safety equipment is installed $ Storage areas are planned and classes of goods based on hazards, frequency of use, safe height, weight, size and crushability of the products $ Access and egress for safe use by appropriate manual handling equipment, forklifts or safe lifting by personnel is ensured
Store products	$ Product condition is observed on delivery and any product below specification is returned to appropriate work areas $ Products are stored observing any requirements for separation of particular classes of goods $ Materials are stacked appropriately for weight loading, size and crushability of goods $ Products are located to enable appropriate number and ease of access for frequently required items
Complete stock and inventory records	$ Stock and inventory records are completed and forwarded to appropriate personnel $ Stock and inventory records are maintained and appropriate re-order documentation is raised

UNIT	Store products
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	This unit requires the application of knowledge of regulations, product type and workplace procedures to the organisation of product storage for production, post production and despatch.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify products and storage information
	$ plan layout of storage areas
	$ interpret regulations and workplace order requirements

	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. including other relevant handling and storage, production support and occupational health and safety units.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ potential hazards including fire and explosion risk, security issues and operator safety around products to be stored
	$ appropriate engineering controls and safety equipment to manage risk
	$ production workflow and requirements for materials or potential delivery or despatch rate of products
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Storage area, manual handling equipment, products/materials for storage
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Consistently monitors stock levels and storage requirements for products to maintain work area effectiveness Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	3	2	2	3	2

UNIT	Store product on reels or spools PMB HANDLE09 A
FIELD	Handling, storage and despatch
DESCRIPTION	This unit applies to employees required to apply knowledge of materials, product purpose and processes to the storage of product on reels or spools.

Element	Performance criteria
Identify the product purpose and processes for storage of product on spools/reels	$ Purpose and final uses of the product is identified $ Equipment and components used for the process are identified $ Characteristics of the materials design are identified in relation to the impact of the size of reel and speed of wind on product quality $ Precautions for fixing of ends, spool adjustments and test and joining processes are identified
Plan work operations	$ Work requirements are identified from workplace approved operating procedures $ Operating principles of the winding equipment and components are identified $ Hazards connected with the winding process are identified from observation of the equipment and workplace reference materials $ Appropriate measures are identified to minimise risks from the identified hazards $ Requirements for checking - test read outs - spool size and length settings on equipment - ancillary supplies and equipment - wind rate and pattern - product quality requirements are identified and noted $ Equipment emergency stops, gauges, guards and controls are identified $ Task sequences are planned within scope of authority including identifying: - times and locations in the production process where checks for product quality, equipment operation within specifications, and required production outputs are most appropriately made - ongoing materials input, waste management and work area housekeeping requirements - any required supplementary equipment for product quality testing or routine lubrication and adjustments
Check winding equipment setup	$ Equipment information, required quality specifications and standard operating procedures are identified $ Spool condition is observed and non-conforming spools are tagged and returned in accordance with workplace procedures $ Winding equipment settings and adjustments, spool size and length settings are checked for conformity to documented procedures $ Product is checked for conformity with workplace quality requirements $ Non-conforming product is tagged and dealt with in accordance with workplace procedures $ Product is threaded through the equipment and fed on to the spool $ Appropriate fixing devices, methods or materials are used $ Tensions are adjusted and laying pattern is checked for conformity with workplace requirements $ Emergency cutoff switches and other safety devices are checked in accordance with workplace procedures
Monitor winding machine operation	$ Winding machine equipment operations are monitored noting cooling line temperatures, amperages, tensions, colour, thickness and product integrity in relationship to the product quality specification

	$ Sections of product requiring repair are identified and appropriate procedures are undertaken to remedy the fault $ Adjustments are made to remedy faults and non-conformity to production standards where applicable $ Material which is able to be reprocessed is collected and reused, waste and scrap is dealt with in accordance with workplace procedures $ Equipment clean up, lubrications, adjustments and waste management are completed in accordance with workplace procedures
Complete work process	$ Product is cut and free ends are secured $ Reel is removed using appropriate manual handling techniques and set down $ Reel is relocated and transported causing no damage to materials, operator or other equipment or personnel $ New spool is fitted and product winding operations are recommenced
Respond to product quality improvement requests	$ Winding equipment process is monitored and conditions which may affect product quality standards are noted $ Process variations are reported within workplace procedures $ Authorised changes in standard operating procedures and specifications are noted and implemented

UNIT	Store product on reels or spools
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This unit covers work involving the operation of reel and spool winding equipment, monitoring production, maintaining personal safety and the safety of others within the context of required product output and product quality standards. $ Work is governed by established workplace procedures and extent of authority for adjustments and other work activities are defined.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify the function of winding equipment machine components and the materials used
	$ explain the impact of winding machine cooling temperatures, tension, wind off speed on product quality and product output
	$ identify and describe own role and the roles of others involved directly in the winding process
	$ explain the effect of unauthorised shut down of equipment on the winding process
	$ plan own work sequence including identification of key checkpoints for equipment monitoring, product quality checks and monitoring of supplies and downstream operations
	$ monitor equipment operation and product quality
	$ identify factors which may influence product quality and production output and appropriate remedies
	$ make appropriate authorised alterations to own work plan and equipment to maintain both product quality and required production output
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials: read relevant safety information and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. This unit may be assessed in conjunction with the unit *Apply materials and process knowledge to complete work operations* and/or *operate rotating plant* or *wire drawing* or *bunching* or *stranding* units. Assessment in conjunction with relevant units for *joining materials* and *manual handling* equipment is recommended.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the nature of the mechanical, hydraulic, pneumatic, electrical and electronic principles which influence the winding equipment operation and product quality
	$ the impact that chemical reactions/mechanical processes have on the form and condition of the materials
	$ production workflow schedule requirements and consequent demand for product
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to winding equipment, appropriate manual handling equipment, product to be stored and relevant workplace and equipment instructions is required.
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment

	Work consistently shows evidence of following logical work sequences in winding product in order to maintain production output and product quality Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	2	2	2	2

UNIT	Conduct housekeeping activities PMB MAINT01 A
FIELD	Maintenance
DESCRIPTION	This unit is applicable to workers who are required to carry out housekeeping duties.

Element	Performance criteria
Identify workplace procedures, resources and housekeeping requirements of different areas of the workplace	$ Workplace procedures for housekeeping are identified $ Equipment and consumables are selected in accordance with work area requirements $ Specific requirements for housekeeping activities in different parts of the employees work area identified and followed
Monitor and maintain cleanliness and tidiness in the workplace	$ Cleanliness, safety and tidiness of the worksites used by the employees is continuously monitored $ Housekeeping issues are raised with designated personnel in accordance with workplace procedures $ Housekeeping equipment and supplies are maintained and stored
Complete assigned housekeeping duties	$ Assigned housekeeping duties are conducted following workplace procedures ensuring that: - waste is removed - maintenance requirements of any damaged items are tagged and notified to appropriate personnel - schedules and records for housekeeping duties are maintained $ Work areas are checked and meet required workplace standards $ Housekeeping activities are carried out following company practices and safe work procedures

UNIT	Conduct housekeeping activities
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	

Job role context	Workplace procedures are followed for housekeeping activities.
	Housekeeping may be scheduled or as required. Limited discretion is applied in identifying required products and processes for housekeeping activities.
	
	Housekeeping duties may include:
	$ cleaning
	$ returning consumables or equipment to storage
	$ waste removal.
	
	Sources of information/documents may include:
	$ maintenance or production schedules$ standard operating procedures for equipment
	$ personal and work area work procedures and practices
	
	Hazards may include:
	$ confined spaces
	$ ergonomics
	$ noise.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ dispose of waste materials including segregation of particular wastes and specialist requirements
	$ apply principles of reduction, reuse, recycle, recover and appropriate repair/replace decision making processes
	$ follow housekeeping requirements for different work areas
	$ use relevant tools and equipment
	$ safely handle solvent (organic and inorganic) cleaning products, steam and pressure equipment
	$ explain reasons for maintaining clean and tidy worksites, the tagging of unserviceable tools and equipment, and following housekeeping and maintenance schedules
	$ complete housekeeping inspection requirements
	$ locate, interpret and apply relevant information and maintain workplace records
	$ identify and safely handle products and materials and apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ identification and correct use of equipment, processes and procedures
	$ maintenance procedures for housekeeping equipment
	$ requirements of simple housekeeping duties such as waste disposal and clean up of areas
	$ production workflow in relation to housekeeping requirements
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to:
	$ necessary housekeeping and cleaning equipment, personal protection equipment and relevant engineering controls
	$ company reporting procedures for health and safety hazards
	$ workplace housekeeping procedures/manual
	$ relevant occupational health and safety regulations

Consistency in performance may include	Establishes effective working relationships with colleagues
	
	Modifies activities to cater for variations in workplace contexts and environment
	
	Shows evidence of application of relevant workplace procedures including:
	$ relevant guidelines relating to the use and tagging of unserviceable or damaged items
	$ hazard policies and procedures
	
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on the job or in an industry-simulated facility.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology

2	2	2	2	2	2	2

UNIT	Maintain equipment PMB MAINT02 A
FIELD	Maintenance
DESCRIPTION	This unit applies to equipment operators who are involved in maintenance.

Element	Performance criteria
Inspect equipment and work area	$ Tags, service records and equipment manufacturer=s information are read prior to commencing maintenance, noting operator identified faults or difficulties and manufacturer=s recommendations $ Maintenance schedules are read and required maintenance tasks noted $ Isolation mechanisms are identified and activated when required $ Equipment is checked prior to and after start up and maintenance following workplace and manufacturer=s procedures and specifications to ensure it is free from damage, leaks and obstructions $ Work area is checked to ensure that it is safe and appropriate for the required tasks $ Required tools, consumables and equipment are identified and assembled
Plan and conduct maintenance process	$ A step by step procedure is worked out to minimise time delays and to sequence maintenance processes consistent with manufacturer=s recommendations $ The maintenance procedure is followed for the tasks and where required appropriate adjustments are made to the plan to deal with unexpected events $ Work is checked to ensure that the operational condition is to the required specifications $ Tools, equipment and unused consumables are returned to the appropriate location and waste is disposed of within workplace policy and procedures
Identify and assess faults	$ Conditions noticed which may cause difficulties in the future are identified and assessments made of the potential effect on the safe and efficient operation of the equipment $ Potential fault conditions are reported to the appropriate personnel
Complete maintenance records	$ Accurate reporting of the results of the maintenance is completed and filed in accordance with workplace procedures, industry guidelines and (any) statutory requirements $ Clear reference is made to any items which may not yet require maintenance but may affect the future working condition or safety of the equipment

UNIT	Maintain equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Work activities are governed by accepted workplace practices and consistent with manufacturer=s procedures and specifications. $ Maintenance will include cyclical maintenance tasks, lubrication, adjustments, removal and replacement of components and may occur when equipment is in production or off line.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ conduct visual inspections and check for:
	- pressure over/under specification
	- fluid leaks and levels
	- tightness of bolts, fixtures and fittings within specs
	- temperature over/under specifications
	- cracks, surface or structural faults or other damage
	$ operate equipment through required range:
	- warning devices
	- operating lights or audible cues
	- lifting devices
	- isolation switches and shut down systems
	- mechanical, electrical, electronic, hydraulic or pneumatic components
	$ explain and report implications on safe and effective work resulting from any potential future defects found
	$ locate, interpret and apply relevant technical information
	$ complete and maintain workplace records of maintenance requirements
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. The unit *Use materials and process knowledge to complete work operations* designated for the relevant materials and process is a recommended corequisite.

Required knowledge and skills may include	Displays the following knowledge and skills in terms of job role or function:
	$ the characteristics and capabilities of equipment, materials and processes used
	$ identification of the factors which may compromise operational capability
	$ sources of information and help available to resolve maintenance difficulties
	$ workflow requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to :
	$ manufacturer=s specifications and information on safe use
	$ tools or equipment requiring maintenance

Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment

	Work sequences are logical and meet requirements of manufacturer=s recommended maintenance process and standards and workplace procedures Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	3	2	2	3	3	3

UNIT	Isolate equipment faults PMB MAINT03 A
FIELD	Maintenance
DESCRIPTION	This unit requires the application of planning, technical knowledge and skills to the checking and isolation of faults and reporting on the status of equipment.

Element	Performance criteria
Identify scope of operational check	$ Equipment components and operating systems are identified and classified $ Appropriate tests and procedures are matched to the equipment operating systems $ Special test procedures and parameters are identified in workplace procedures and manufacturer=s specifications $ Physical condition of equipment is observed $ Preliminary observations are recorded $ Test procedures are discussed with appropriate personnel and necessary permission obtained where required
Plan operational checks	$ Specifications and notes from preliminary observations are checked and areas to be clarified are identified $ Sequence of tests is planned noting areas where results and observations should be recorded $ Safe area for testing is identified $ Arrangements are made for any additional resources (including other employees)
Check unit through full operating range	$ Testing is undertaken observing relevant safety and operational requirements $ Results are recorded and findings confirmed
Isolate fault and/or formulate recommendations	$ Impact of fault on work schedule is identified $ Proposals for equipment repair are recorded based on faults found, cost/time implications and workplace approval systems $ Report explained to relevant workplace personnel including any options and recommendations $ Where appropriate parts are procured and/or repairs undertaken in accordance with enterprise procedures

UNIT	Isolate equipment faults
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Operational checks are made at the commencement of all equipment operations according to workplace practices and consistent with manufacturer=s recommendations. $ Faults are reported to appropriate workplace locations for rectification. $ Faults may involve mechanical, hydraulic, electrical, electronic and pneumatic systems and application of a range of checks to isolate faulty systems.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select test and checking methods based on cost and time effectiveness
	$ identify internal/external sources to effect repairs
	$ read and interpret circuit diagrams for mechanical, hydraulic, pneumatic, electrical/electronic operating systems
	$ interpret technical specifications and Manufacturer=s instructions
	$ use technical references and Manufacturer=s information to locate relevant data
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ appropriate test procedures and use of equipment
	$ operating principles for mechanical, hydraulic, pneumatic, electrical/electronic systems
	$ interpretation of appropriate instrument readings
	$ normal operating condition of the relevant production equipment
	$ production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to
	$ machine circuit diagrams for hydraulic/pneumatic and electical/electronic circuits
	$ equipment exhibiting both fault and no fault conditions, testing equipment and manufacturer=s specifications

Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect,	Commu-nicate	Plan &	Work with	Use	Solve	Use

analyse & organise information	ideas & information	organise activities	others & in teams	mathemati-cal ideas & techniques	problems	technology
3	3	3	3	3	3	3

UNIT	Coordinate the conduct of maintenance PMB MAINT04 A
FIELD	Maintenance
DESCRIPTION	This unit applies to employees required to apply knowledge of production equipment operating principles, service requirements and workplace production operations to coordinating the conduct of maintenance.

Element	Performance criteria
Establish maintenance requirements	$ Equipment specifications, service requirements and workplace procedures are checked for recommended maintenance intervals and processes $ Special requirements for maintenance are separated from normal lubrication, adjustment and maintenance schedules $ Comparisons with previous experience, future equipment use, production requirements and standard operating procedures are made $ Work plan for the maintenance and work schedule identified and developed $ Maintenance providers (internal/external) are identified $ Costings for process are identified based on work schedule (equipment/staff offline), equipment manufacturer=s recommendations, charges for materials, equipment and consumables and external/internal labor charges $ Required production interruptions, processes and procedures are documented and recorded $ Clearances for any required costs for the maintenance obtained
Organise maintenance	$ Production schedules and staff rosters are checked to identify time(s) when the maintenance process may be scheduled including optimum timing for (any) shutdown $ Permission from supervisory personnel is obtained for timing of maintenance to optimise the maintenance process and production $ Detailed work plans are developed to accord with: - production schedules - availability of expertise - scheduling of resource availability $ Employees with the required competencies are identified and where necessary appropriate training and assessment is facilitated $ Approvals for production schedule, employee work pattern and maintenance schedule adjustments are obtained and workplan is refined to ensure the maintenance program will maintain workplace outputs in terms of workplace policy
Assemble maintenance requirements	$ Resources required (equipment, personnel and consumables) to meet work schedule are identified $ Consumables, equipment and expertise are located and coordinated to meet maintenance work schedule $ Externally sourced equipment, consumables and expertise are identified and appropriate arrangements made for procurement
Complete maintenance procedures	$ The maintenance work schedule is completed following the work plan $ Appropriate readings, measurements and recordings are made and compared to equipment, product and other relevant specifications$ Areas requiring further testing are identified and appropriate procedures for testing recommended to supervisory staff $ Appropriate adjustments to the work schedule plan are made based on experience and documentation completed $ Records for production and other purposes are completed and fowarded to appropriate personnel noting areas where changes to equipment operation or routine maintenance are required to maintain optimum work output and equipment life

UNIT	Coordinate the conduct of maintenance
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Coordination of maintenance may include internal/external expertise, consumables, tools and equipment and may impact on normal production. $ Work activities of other employees is supervised and assistance to others is provided. $ Maintenance activities are governed by accepted workplace practices and consistent with manufacturer=s procedures and specifications.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify implications of the maintenance for production and work activities
	$ coordinate the range of tasks involved in maintenance within the context of production schedules
	$ identify the resource requirements for maintenance including required competencies of the employees involved
	$ apply knowledge of the production process, workplace practices, equipment operating systems and maintenance requirements to the organisation and conduct of the work
	$ locate, interpret and apply relevant technical and production information
	$ complete and maintain workplace records
	$ identify safety precautions appropriate to the procedures and circumstances
	$ support others in conducting the maintenance tasks.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ characteristics and capabilities of equipment, materials and processes used
	$ identification of the factors in production schedules, time and resource requirements (including sourcing expertise external to the work team) when scheduling the maintenance process
	$ focus of operation of work systems and equipment
	$ application of relevant agreements, codes of practice or other legislative requirements
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to production information and schedules, equipment specifications and workshop manuals for production process equipment requiring maintenance.
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Planned work sequences are logical and conform with production schedules, work rosters Maintenance returns equipment and work process to required specifications Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	3	3	3

UNIT	Complete workplace induction PMB WKOPS01 A
FIELD	Workplace operations
DESCRIPTION	This unit involves the application of workplace procedures to the conduct of work and self management within a workplace environment.

Element	Performance criteria
Identify major areas of the workplace, in terms of functions, organisational structures & occupation	$ Layout of the workplace, the production process and the work activities conducted in each area are identified $ Organisational structure of the workplace and the relationship of structure to work roles and classification grouping is outlined $ The types of production and storage facilities in the workplace, the purpose of each and (any) risk factors attached to them is identified $ Equipment and technology used in the workplace is explained in terms of function and physical characteristics
Organise and accept responsibility for own workload	$ Individual responsibilities under industrial agreements are identified and acted on in the conduct of assigned duties $ Priorities and deadlines are established in consultation with others (as appropriate) and recorded $ Work activities are planned and progress of work is communicated to others whose personal work plans and timelines may be affected $ Work is completed to the standard expected in the workplace and in accordance with any guidelines, directions or instructions $ Variations and difficulties affecting work requirements are identified through regular reviews and action is taken to report these issues to supervisory staff $ Additional support to improve work is communicated clearly to appropriate personnel
Apply ethical practices	$ Workplace procedures, regulations and legislation appropriate to the position are identified and followed $ Commitments and undertakings to customers (internal/external) and supervisors are met $ Required confidentiality is maintained $ Appropriate codes of acceptable and ethical work practices are applied $ Workplace security policies are identified including the relationship of security procedures to personal job role $ Implications of equal opportunity and sexual harassment legislation for self and others are identified and explained
Receive and act constructively on personal feedback	$ Suggestions on ways to improve work are sought regularly from appropriate personnel $ Feedback is acted upon as required to improve work performance
Participate in identifying and meeting own learning needs	$ Operations of the workplace, workplace equipment and focus of endeavour identified $ Organisational structure, career paths and training opportunities appropriate to the enterprise are identified $ Steps are taken, in consultation with appropriate personnel, to identify own learning needs through assessment and planning for future work requirements $ Appropriate opportunities to learn and develop required competencies are undertaken including establishing networks and working relationships with others
Plan and organise a personal daily routine	$ Daily routine is planned to take into account rosters, industrial agreements and workplace procedures $ Clarification of requirements of tasks is sought when appropriate $ Achievable time and other performance measures are agreed $ Tasks are completed with variations to plan identified and reported

UNIT	Complete workplace induction
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	This unit applies to the initial employment of an individual. It involves the application of relevant workplace procedures to the planning and conduct of work.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ provide customer/client service and work effectively with others
	$ convey information in written and oral form
	$ explain the purpose and requirements of the customers needs and the impact of that relationship to industry, company structure, business systems, environment, legal and government requirements
	$ describe enterprise operating principles and requirements for workplace documentation
	$ identify workplace structure and roles and responsibilities of the individuals, authority systems and contacts
	$ follow workplace procedures and ethical requirements relevant to the position
	$ describe employee and employer obligations under award, employment contract, occupational health and other legislation in relation to engagement, working times and conditions, dismissal and discipline
	$ identify enterprise products and services
	$ locate, interpret and apply relevant information
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ focus of operation of work systems, equipment, management and site operating systems
	$ relationships and requirements of work and operating systems in respect of related systems
	$ potential career paths and opportunities for training and advancement
	$ impact of trends in employment and business in general on the individual and the company
	$ sources of information on laws impacting the industry and economic and social trends which will impact on the enterprise and individual
	$ work flow within the enterprise and within the scope of the individuals position
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to workplace structures and policies
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment

	Opportunities for learning on and off the job taken and used advantageously Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathematical ideas & techniques	Solve problems	Use technology
1	2	3	2	1	1	1

UNIT	Apply workplace procedures to improve work area performance PMB WKOPS02 A
FIELD	Workplace operations
DESCRIPTION	This unit involves the application of workplace policies & procedures to the implementation and ongoing development of work areas within particular production processes.

Element	Performance criteria
Identify work flow in the workplace in relation to productivity	$ The flow of work is identified including the effect that variation(s) in workflow has on operations $ Consideration is given to the impact of factors such as high and low workload periods and the volume of output of production processes on workflow is used when identifying workflow and productivity factors $ Production processes in the work area are analysed to detect any areas which may impact on workflow effectiveness $ Variance of workflows against agreed benchmarks are documented $ Causes of workflow variances are considered and alternate solutions for rectification are generated $ Recommendations to resolve the issue(s) are made and reported to appropriate personnel
Explain workplace relations processes which effect the workplace and the operations of its production processes	$ Awards and enterprise agreements are read to identify aspects which may contribute to improving the effectiveness of work operations $ Opportunities for training and development are identified within the workplace context and workplace procedures $ Processes for negotiation of changes at enterprise level to improve workplace effectiveness are identified $ Suggestions which may lead to improved work effectiveness of teams and individuals are raised within workplace policies and procedures
Organise staff and equipment to complete specific tasks	$ Priorities for tasks are identified and workplace personnel are informed $ Operating procedures and methods are explained to workplace personnel and follow up communication methods are used to ensure that work requirements are applied $ Competency needs for the work are identified and staff allocated and/or trained and assessed to meet these needs $ Workplace personnel and equipment are organised to meet requirements ensuring that work loads are balanced and other required workplace activities are completed within production schedules $ Work practices in the production area optimise production for the type of product within production workflow and regulatory requirements $ Appropriate workplace occupational health and safety and other regulatory procedures are followed by team members when completing production activities $ Advice to line manager is provided on the allocation of staff and resources required to produce products including those with special requirements $ Workplace procedures are amended within agreed parameters and trialed to assess the degree of improved performance
Assist work team members to maintain workplace security	$ Personnel are informed of workplace policies and procedures in relation to security $ Workplace personnel are provided with feedback in relation to the implementation/non-implementation of security procedures $ Employees are provided with ongoing supervision and training to facilitate awareness and detection of theft $ Matters likely to affect security are reported in accordance within workplace policy

UNIT	Apply workplace procedures to improve work area performance
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Competencies are normally used within approved workplace routines, methods and procedures. Some discretion and judgement is required in the selection of equipment, work organisation, services and allocation of work tasks within agreed timeframes.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ coordinate teams and resources to meet designated outcomes
	$ optimise production output in terms of quality, time and resource cost
	$ consider impact of process, equipment, procedural or personnel changes on the production process
	$ identify improvements and make appropriate recommendations
	$ identify potential faults in materials and/or process and/or product and propose causes and effects
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify safety precautions appropriate to safely handle products and materials.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ scope of authority of the position
	$ consultative processes to implement change
	$ workplace management structure and lines of authority
	$ content of award, enterprise agreement and workplace policies and procedures
	$ production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to group or team, workplace procedures, production system
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others Consistently makes recommendations which result in potential for improvement in production outcomes (product quality, employee health and safety, environmental impact and production costs)

	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	3	3	3

UNIT	Induct new team members PMB WKOPS03 A
FIELD	Workplace operations
DESCRIPTION	This unit applies to employees engaged in inducting employees to the workplace.

Element	Performance criteria
Outline the relationship between employee and the company	$ Employee is greeted and introduced to key personnel and areas in the workplace $ Enterprise objectives, operating systems and organisational structures are explained $ The relationship between the employees position and the organisational structure and objectives is identified $ Required occupational health and safety, workplace procedures and employment conditions are described $ Sources of information and assistance for the employee are identified
Establish requirements of position	$ Job role is explained and responsibilities and reporting relationships are described $ Immediate work colleagues are introduced $ Workplace facilities and lay-out are shown to the employee $ Initial training in relevant occupational health and safety, equipment and work systems is arranged and conducted $ Opportunities for the employee to clarify concerns and ask questions are encouraged $ Training opportunities for the development of the individual=s job role are identified and expectations are clarified $ Requirements of territory/state/federal legislation on equal employment opportunity, sexual harassment and anti-discrimination is explained
Complete relevant workplace documentation	$ Enterprise personnel records are completed (where required) $ Tax declaration and other relevant workplace documentation checked for compliance with requirements (where required) $ Employee requested for any additional information and notes taken of any required additional actions $ Documentation is submitted to appropriate personnel

UNIT	Induct new team members
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	This role is critical to the effective integration of new group or team members to the work area and/or organisation.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify expectations of the employee and provide appropriate information and advice to deal with the expectations
	$ identify product, materials and work processes appropriate for the individuals= work role
	$ provide customer/client service and work effectively with others
	$ convey information in written and oral form
	$ locate, interpret and apply relevant information
	$ maintain workplace records

	$ interpret relevant safety information within requirements of duty of care $ identify and safely handle relevant equipment, substances, other products and materials and identify safety precautions appropriate to the task of team members.
Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ focus of operation of work systems, equipment, management and site operating systems
	$ requirements for the employee=s new position and working relationships
	$ production workflow and the role of the employee and team members in the process
	$ identification and correct use of technology, information systems, equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Employee(s) for induction
Consistency in performance may include	Establishes effective working relationships with colleagues Identifies and adapts to workplace objectives, cultures, products, customers and services Modifies activities to cater for variations in workplace contexts and environment Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others Consistently assists new employees to identify job role, legislative and workplace requirements and training opportunities
Context for assessment	Assessment may occur on or off the job.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	3	2	3	1	2	2

UNIT	Interpret job specifications PMB WKOPS04 A
FIELD	Workplace operations
DESCRIPTION	This unit applies to employees required to read and interpret job specifications and identify the impact of the specifications on production requirements.

Element	Performance criteria
Collect information	$ Job specifications are read and key requirements are noted $ Steps and stages in the process are identified $ Questions regarding requirements and expectations are raised with appropriate personnel and appropriate clarification of specifications are obtained
Analyse job requirements	$ Own competencies are assessed in terms of meeting job specifications $ Any required additional training is discussed with supervisor $ Standard operating procedures and any quality specifications are read and used to plan own work activities $ Points where particular care is required are noted and strategies to ensure adherence to work requirements are identified

UNIT	Interpret job specifications
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Work involves the analysis of job specifications and the impact on plant machinery, raw materials and personnel.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify product, materials and work processes appropriate for the work role
	$ recognise sources and impact of potential constraints on the work required and relevant procedures to minimise the constraints
	$ interpret relevant safety information within requirements of duty of care
	$ identify and safely handle relevant equipment, substances, other products and materials and identify safety precautions appropriate to the tasks
	$ identify requirements of standard operating procedures and job specifications
	$ locate, interpret and apply relevant information
	$ maintain workplace records.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ machine processes
	$ raw material capabilities
	$ quality procedures
	$ production workflow in relationship to own role in the process
	$ focus of operation of work systems and equipment
	$ application of relevant agreements, codes of practice or other legislative requirements
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Job specifications, production capability statements/specifications
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Consistently interprets and meets the requirements of the job specification Identifies and adapts to workplace objectives, cultures, products, customers and services Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.
Key competencies	

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	3	3	3

UNIT	Coordinate shift handover PMB WKOPS05 A
FIELD	Workplace operations
DESCRIPTION	This unit applies to employees required to arrange shift handover.

Element	Performance criteria
Collect information	$ Stages of production at shift handover are noted and any requirements for shift are documented $ Ongoing or pending maintenance is identified and communicated $ Raw material supplies are checked and stock orders placed in accordance with workplace procedures
Identify implications for continuing work	$ Impact of impending or current production activities on work flow is identified and reported to appropriate personnel $ Recommendations for next shift are identified
Communicate requirements to incoming shift	$ Written and oral advice is provided to incoming shift personnel $ Machinery effected by maintenance/repair/special process is tagged appropriately $ Required documentation for shift handover is completed $ Reports are made to appropriate personnel in accordance with workplace procedures

UNIT	Coordinate shift handover
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	

Job role context	Work involves the collection of information regarding work progress and any problem areas and communicating with incoming/outgoing shift personnel.
	
	Sources of information/documents may include:
	$ machine readout
	$ production reports

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify requirements for the production process
	$ identify product, materials and work processes appropriate for the production process
	$ recognise sources and impact of potential constraints to maintaining production and relevant procedures to minimise the constraints
	$ interpret relevant safety information within requirements of duty of care
	$ locate, interpret and apply relevant information, collate data and communicate orally and in writing
	$ apply implications of data to projected production
	$ maintain appropriate shift records$identify and safely handle relevant equipment, substances, other products and materials and identify safety precautions appropriate to the task of team members.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ equipment status
	$ work order requirements
	$ production workflow requirements in relation to the shift
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Ongoing production and shift change crews
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Communicates relevant issues clearly and concisely Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	3	3	3

UNIT	Work with others in a team PMB WKOPS06 A
FIELD	Workplace operations
DESCRIPTION	This unit applies to employees required to use basic knowledge and skills to work effectively with others.

Element	Performance criteria
Contribute to determination of appropriate work roles	$ Work roles of each team member are identified based on information and instructions about objectives, performance requirements and procedures $ Contributions are made to assist in the determination of the appropriate roles and responsibilities for the successful completion of the activity
Contribute to the planning of the activity	$ Suggestions and information are provided as appropriate to contribute to the planning of the activity and the associated procedures $ Evaluations of the outcomes of the activity are used to inform the planning process
Work with others	$ Forms of communication appropriate to the activity are used $ Assistance in the completion of the activities is requested where appropriate $ Contributions to the achievement of a required outcome are made $ Work is undertaken in accordance with specified procedures on an individual and shared basis as appropriate $ Problems are discussed and resolved where possible through agreed and accepted processes $ Suggestions for improvements to processes are made and discussed within the team

UNIT	Work with others in a team
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Team activities may be routine and predictable but the outcomes require application of knowledge and skills to work effectively with others in a workplace context.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ work effectively with colleagues
	$ operate in with others to complete a work oriented activity
	$ contribute to collective planning, cooperative work and effective outcomes for the activity
	$ provide support to other work group members
	$ locate, interpret and apply relevant information
	$ maintain workplace records$ provide customer/client service.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ production workflow and the roles of team members in maintaining production levels
	$ focus of operation of work systems, equipment or management, site and organisational operating procedures
	$ identification and correct use of equipment, processes and procedures

	$ planning own work including predicting consequences and identifying improvements
	$ use of appropriate communication strategies including appropriate body language and conversational language
	$ provide support to other work group members

Resource implications	Access to others to complete a cooperative work activities
Consistency in performance may include	Consistently collaboratively contributes to work planning, including setting objectives, time lines and evaluating outcomes of the project Identifies and adapts to workplace objectives, cultures, products, customers and services Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	1	2	2

UNIT	Manage workplace information PMB WKOPS07 A
FIELD	Workplace operations
DESCRIPTION	This unit of competency is for those employees participating in the planning processes in organisations incorporating information gathering, planning and resourcing within the organisation.

Element	Performance criteria
Identify and source information needs	$ The information needs of individuals/teams is determined and the potential sources of information are identified $ Information held by the organisation is reviewed to determine suitability and accessibility $ Arrangements are made to obtain information which is not available/accessible within the organisation
Collect, analyse and report information	$ Collection of information is timely and relevant to the needs of individuals/teams $ Information is in a format suitable for analysis, interpretation and dissemination $ Information is analysed to identify and report relevant trends and developments in terms of the needs for which it was acquired
Use management information systems	$ Management information systems are used effectively to store and retrieve data for decision making $ Technology available in the work area/organisation is used to manage information efficiently and effectively $ Recommendations for improving the information system are submitted to designated persons/groups
Prepare business plans/budgets	$ Individuals/teams are involved in business plan/budget preparation in a way which uses their contribution effectively and gains their support for the outcomes $ Business plans/budgets are prepared and presented in accordance with the organisation=s guidelines and requirements $ Contingency plans are prepared in the event that alternative action is required
Prepare resource proposals	$ Resource planning data is collected in consultation with colleagues including those who have a specialist role in resource management $ Estimates of resource needs and utilisation reflects the organisation=s business plans, customer and supplier requirements $ Proposals to secure resources are supported by clearly presented submissions describing realistic options, benefits, costs and outcomes

UNIT	Manage workplace information
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Operates under general guidance on progress and outcomes of work $ Exercises some discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes $ May have responsibility for others individually or in teams
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ manage work to achieve the organisation=s goals and business plans
	$ identify workplace products, materials used, production and work processes appropriate to the workplace
	$ locate, interpret and apply relevant information to prepare basic financial information in workplace format
	$ communicate effectively in writing and orally to explain financial concepts in relation to budgets and business plans
	$ prepare resource proposals within budget
	$ identify requirements to safely handle workplace equipment, substances, products and materials and identify safety precautions appropriate to workplace within budgets.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ scope of position and extent of authority and responsibility
	$ requirements for compliance with quality and regulatory procedures
	$ production workflow, schedules and requirements
	$ focus of operation of work systems and equipment and related costs and resource requirements
	$ identification and correct use of information systems, technology, equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to budgetary information, business plans, product costings, market price and related information
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Identifies and adapts to workplace objectives, cultures, products, customers and services Business plans and implementation strategies cover legislative obligations Accesses expertise in financial and resources management to assist in budget/business plan formation Monitors workplace information, identifying means to improve the quality of data collected and information dissemination

	Where required, negotiate improvements to the information systems available in the organisation
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	2	2	2	2

UNIT	Participate in, lead and facilitate work teams PMB WKOPS08 A
FIELD	Workplace operations
DESCRIPTION	This unit of competency is for those with a role in leading, participating in, facilitating the empowerment of work teams/groups, motivating, mentoring, coaching and developing team members and achieving team cohesion.

Element	Performance criteria
Participate in team planning	$ The team establishes clearly defined goals, purpose, roles, responsibilities and accountabilities within the organisation=s goals and objectives $ The team performance plan contributes to the organisation=s business plan, policies and practices $ The team agrees to processes to monitor and adjust its performance within the organisation=s continuous improvement policies $ The team includes in its plans ways in which it can benefit from the diversity of its membership
Develop team commitment and cooperation.	$ The team uses open communication processes to obtain and share information $ The team encourages and exploits innovation and initiative $ Support is provided to the team to develop mutual concern and camaraderie
Manage and develop team performance.	$ The team is supported in making decisions within agreed roles and responsibilities $ The results achieved by the team contribute positively to the organisation=s business plans $ Team and individual competencies are monitored regularly to confirm that the team is able to achieve goals $ Mentoring and coaching supports team members to enhance personal and collective knowledge and skills $ Delegates= performance is monitored to confirm that they have completed the relevant delegation(s)/assignment(s)
Participate in and facilitate the work team.	$ Team effectiveness is encouraged and enhanced through active participation in team activities and communication processes $ Individuals and teams are actively encouraged to take individual and joint responsibility for actions $ The team receives support to identify and resolve problems which impede performance

UNIT	Participate in, lead and facilitate work teams
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Operates under general guidance on progress and outcomes of work $ Exercises some discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes $ A range of opportunities may be used to develop teams, including mentoring, coaching, action learning, exchange/rotation and structured learning programs. $ May have responsibility for others individually or in teams
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ apply leadership skills to the completion of work team projects including the allocation and delegation of tasks, taking into account task requirements, development needs and organisational policy
	$ mediate and resolve issues maximising positive outcomes
	$ apply techniques to encourage appropriate participation of team/group members
	$ identify requirements of tasks and organise planning, job completion and evaluation stages
	$ locate, interpret and apply relevant information
	$ provide customer/client service and work effectively with others.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ focus of operation of work systems, equipment, management and site operating systems
	$ competencies and development opportunities for individuals in the team/group
	$ coaching and mentoring approaches to support team members to share knowledge and skills
	$ company business policies and plans including procedures for accessing staff training and development activities
	$ identification and correct use of technology, information systems equipment, processes and procedures

Resource implications	Operational team, projects requiring execution

Consistency in performance may include	Establishes effective working relationships with colleagues
	
	Modifies activities to cater for variations in workplace contexts and environment
	
	Consistently considers when allocating tasks :
	$ competency requirements, size of tasks, development opportunities and requirements of organisational policy and operating procedures and makes appropriate adjustments when required
	$ follows grievance procedures
	$ cultural differences in the workplace, including modes of behaviour and interactions among staff and others and adapts processes accordingly
	
	Arranges work to achieve goals and results
	
	Uses consultative approaches to implement and evaluate team performance plan

	Team performance is improved through access to development activities
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	2	3	2

UNIT	Follow workplace quality procedures PMB QUAL01 A
FIELD	Quality
DESCRIPTION	This unit applies to employees who are required to use basic knowledge and skills to follow quality procedures and implement individual and team-based quality improvement activities in the workplace.

Element	Performance criteria
Apply quality concepts	$ Responsibility is taken for quality of own work when providing services or products to meet external and internal customer needs $ Work is completed in accordance with workplace standards as defined in workplace policies and procedures $ Basic quality concepts are applied to work activities
Work within a quality improvement system	$ Instructions and duties are performed consistent with a quality improvement system requirements $ Work standards as defined in workplace policies and procedures are maintained or exceeded

UNIT	Follow workplace quality procedures
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	

Job role context	Working within workplace quality procedures and quality specifications is fundamental to successful workplace achievement.
	
	Sources of information/documents may include:
	$ workplace quality specifications and procedures
	$ AS/NZISO standards or other quality standards
	$ manufacturer=s specifications
	$ workplace operating procedures and policies.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ follow quality assurance procedures
	$ recommend improvements to work systems
	$ provide customer/client service
	$ work effectively with colleagues
	$ convey information in written and oral form
	$ locate, interpret and apply relevant information
	$ contribute to the maintenance workplace records.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ interpersonal communication skills
	$ team skills

	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to quality assurance procedures and work function appropriate for the procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others Quality assurance procedures are identified and followed in all aspects of job function and operations Shows evidence of application of relevant workplace procedures including applying quality system procedures Action taken promptly - accidents and incidents reported within regulatory requirements and following workplace procedures Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	2

UNIT	Use quality improvement systems and processes PMB QUAL02 A
FIELD	Quality
DESCRIPTION	This unit applies to employees who monitor the quality of processes under personal control and who are required to recommend improvements to the quality system.

Element	Performance criteria
Monitor quality system	$ Quality procedures appropriate for the position are identified and followed $ Records are completed and filed in accordance with system requirements $ System improvement notices, reports and other quality data are interpreted to identify where non-conformity and variations occur
Use quality improvement systems, tools and techniques	$ Variations in the quality of services and/or products from required standards are detected and reported in accordance with workplace procedures $ Quality of service is monitored and adjusted as required to ensure the satisfaction of both internal and external customers $ Quality improvement tools and techniques are used both individually and as part of a work team to systematically improve the quality of work and services $ Improvements to work processes are planned, trialed, outcomes are checked for improvement and compliance with workplace requirements and then implemented
Cooperate with internal/external auditors	$ Audit procedures are clarified, appropriate procedures checked and clarifications obtained $ Relevant documentation is assembled $ Direct report personnel who may be involved are notified $ Auditors requests are co operated with promptly $ Appropriate responses to audit reports are made with action taken to rectify (any) non-compliance identified in the audit
Review and update quality system requirements in work area	$ Reported system improvement requirements and variation reports are analysed to determine areas for improvement to determine areas for improvement $ Changes in internal and external environment are considered as part of the review process $ Proposed amendments to the quality system are distributed within workplace quality procedures$ Appropriate information dissemination program and training is arranged for employees required to use the revised system

UNIT	Use quality improvement systems and processes

Range of variables

This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity.

The common range of variables should be used to assist in planning assessment and training activities.	

Job role context	Work involves the monitoring and evaluation of quality procedures under the employee=s control and recommending improvements to improve quality procedures and documentation.
	Quality systems improvement processes may involve customers (internal and external), and suppliers.
	Sources of information/documents may include:
	$ qality audit and non-conformity reports
	$ ANZ/ISO or automotive quality accreditation requirements
	$ quality procedures.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ observe and record outcomes of quality audits
	$ evaluate quality procedures in terms of workplace requirements
	$ make recommendations for improvement
	$ locate, interpret and apply relevant information
	$ maintain workplace records in relationship to the quality systems
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ quality system and mechanisms for improvement
	$ impact of quality accreditation on competitive advantage of the workplace
	$ production workflow in relation to requirements of the quality system
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Quality system and accreditation requirements within a workplace environment

Consistency in performance may include	Establishes effective working relationships with colleagues
	Modifies activities to cater for variations in workplace contexts and environment
	Quality procedures are followed, non-compliances are noted, improvements are recommended and implemented in accordance with workplace procedures
	Shows evidence of application of relevant workplace procedures including:
	$ reporting relationships
	$ issue resolution procedures

	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	2	3	3

UNIT	Conduct quality audits PMB QUAL03 A
FIELD	Quality
DESCRIPTION	This unit applies to employees required to internally audit an organisation=s compliance with relevant quality standards documentation.

Element	Performance criteria
Prepare for internal audit	$ Procedures required to be audited are identified and implications of non-conformance estimated $ Technical and/or calibration requirements for audits are noted and (where necessary) appropriate support personnel are identified $ Production schedules are investigated to identify appropriate schedule for audit
Schedule internal audit	$ Audit timings are planned to ensure that relevant procedures are conducted within workplace agreed time intervals and timeframes $ Audit frequency is adjusted based on importance of activities to the business unit, process or organisational changes or customer feedback $ Contact is made with appropriate personnel and relevant appointments for the audit are made
Conduct audit and document findings	$ Appropriate approaches for the audit are confirmed $ Observations and interviews are conducted with (any) required approved third party $ Documentation of observations and interview responses is completed
Report audit results	$ Audit results are discussed with personnel associated with the procedures or standards audit $ Audit reports indicate compliances noted $ Non-compliance reports indicate location, relevant standard or procedure, evidence and supporting information from audited personnel $ Audit variances which do not qualify as non-compliance are identified as possible quality system improvements and documented $ Reports are forwarded to appropriate personnel
Respond to audit report	$ Quality system employee responses to audit reports are noted and issues for response are identified $ Corrective actions identified are referred to in discussions with personnel required to implement the necessary standards/procedures $ Results of improvement request reports are followed up and checked

UNIT	Conduct quality audits
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Work involves the conduct of audits of quality procedures, interacting with employees using the procedures and reporting results to appropriate workplace personnel.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify product, materials and work processes appropriate for the quality system
	$ interpret quality procedures and requirements for audits
	$ explain audit procedure to relevant employees and assist them to fulfill audit requirements
	$ conduct audits and gather appropriate evidence
	$ evaluate outcomes of audits in terms of procedure and process requirements
	$ make recommendations and support findings with evidence
	$ locate, interpret and apply relevant information
	$ maintain workplace records, system improvement notice responses and other quality records

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ quality procedures and workplace application
	$ impact of quality accreditation on workplace competitive advantage
	$ questioning and documentation skills appropriate to the personnel and processes involved in the audit
	$ production workflow and relationship to the quality system
	$ focus of operation of work systems and equipment
	$ identification and correct use of personally used workplace equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Organisational quality system, documentation and procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Identifies and adapts to workplace objectives, cultures, products, customers and services Consistently identifies compliance requirements, notes non-conformity, quality improvements and makes recommendations to maintain quality standards Modifies activities to cater for variations in workplace contexts and environment Action taken promptly reports completed within accrediting authority requirements and following workplace procedures
Context for assessment	Assessment may occur on the job or in an workplace simulated facility with relevant process equipment, simulated job orders, work instructions and deadlines.
Key competencies	

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	2	3	2

UNIT	Follow occupational health and safety procedures PMB OHS01 A
FIELD	Occupational health and safety
DESCRIPTION	This unit is applicable to workers required to follow workplace occupational health and safety procedures.

Element	Performance criteria
Identify and follow workplace procedures for hazard identification and risk control	$ Workplace procedures for occupational health and safety are identified and related work instructions for controlling risks are accurately followed $ Workplace procedures for dealing with accidents, fire and emergencies are known and followed $ Hazards in the workplace are identified and reported to designated personnel in accordance with workplace procedures
Contribute to improvements to workplace occupational health and safety	$ Occupational health and safety issues are raised with designated personnel in accordance with workplace procedures and relevant occupational health and safety legislation $ Contributions to improvements in workplace occupational health and safety are made within workplace procedures and may include input into hazard identification, risk assessment and risk control
Complete occupational health and safety records	$ Occupational health and safety records for self are completed in accordance with workplace requirements $ Workplace procedures for the reporting of occupational health and safety records are followed

UNIT	Follow occupational health and safety procedures
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	

Job role context	Work involves use of workplace policies and procedures to maintain a safe work environment for self and others.
	
	Direction is provided and operations are limited by workplace procedures and employers responsibility to provide a healthy and safe workplace.
	Consultative processes may involve occupational health and safety representatives and committee members.
	
	Hazards may include:
	$ chemical spills
	$ dust/vapours
	$ stationary and moving machinery, parts or components
	$ hazardous substances or dangerous materials
	$ noise, light, energy sources
	$ electrical equipment
	$ humidity, air temperature, radiant heat$ broken and damaged equipment
	$ lifting practices
	$ waste management and disposal
	$ lighting levels

	$ floor surfaces
	$ water hazards
	$ traffic flows, vehicle and equipment operation.

Sources of information/ documents may include	$ Company operating procedures - hazard policies and procedures - emergency, fire and accident procedures - personal safety procedures - procedures for the use of personal protective clothing and equipment - hazard identification - issue resolution procedures - job procedures - work instructions - materials safety data sheet explanatory texts $ Hazard specific information $ Health and safety committee minutes $ Labels $ Materials safety data sheets $ Personal and work area work procedures and practices $ Conditions of service, legislation and industrial agreements including: - workplace agreements and awards - occupational health & safety procedures $ Applicable State, Territory, Commonwealth legislation and regulations which relate to: - occupational health & safety regulations and legislation - workplace relations Act(s) - worker=s compensation - manual handling - first aid - noise - confined spaces - plant - ergonomics - rehabilitation - smoke free environment
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify potential hazards
	$ report hazardous situations
	$ locate, interpret and apply relevant information
	$ contribute to the maintenance of workplace records
	$ identify and safely handle products and materials
	$ follow the requirements of relevant legislation and related codes of practice in relation to individual obligations for duty of care.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ application of relevant agreements, codes of practice and legislative requirements
	$ location and use of safety alarms, manifests, emergency shut off systems, emergency communication systems
	$ signs and signals used for occupational health and safety

	$ terms used in materials safety data sheets and labelling of products and equipment
	$ HAZCHEM symbols and implications for safe work & storage
	$ storage and use of hazardous substances
	$ storage and use of flammable materials
	$ handling of broken or damaged equipment
	$ procedures for maintenance of plant and equipment
	$ manual and mechanically assisted lifting and load shifting procedures
	$ transport requirement for goods within workplace
	$ obtaining and using information from safety labels, instructions for safe work, relevant materials safety data sheets, workplace procedures and codes of practice
	$ application of hierarchy of controls in particular the appropriate use of personal protection equipment and engineering controls

Resource implications	$ Access to policies, procedures and information on occupational health and safety $ Access to support personnel, engineering controls and personal protective equipment

Consistency in performance may include	Consistently cooperates with supervisors and occupational health and safety representatives and personnel
	
	Recognises and appropriately deals with cultural differences in the workplace, including modes of behaviour and interactions among staff and others
	
	Modifies activities to cater for variations in workplace contexts and environment
	
	Shows evidence of application of relevant workplace procedures including:
	$ reporting procedures in regard to unsafe situations, fire hazards, broken or damaged equipment or fittings, sickness and accidents
	$ emergency and evacuation procedures
	$ hazard policies and procedures
	$ occupational health and safety issue resolution procedures
	$ quality assurance procedures (where existing)
	
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on the job or in an industry simulated facility.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	2

UNIT	Handle hazardous substances/dangerous goods PMB OHS02 A
FIELD	Occupational health and safety
DESCRIPTION	This unit applies to employees engaged in handling dangerous goods.

Element	Performance criteria
Identify and classify dangerous goods and hazardous substances	$ Dangerous goods and hazardous substances are identified and classified from labels and other identification $ Storage requirements for hazardous substances, dangerous goods and dangerous substances are identified and applied $ Legislative requirements for hazardous substances, dangerous goods and dangerous substances are known and used to plan work activities $ Signs for dangerous goods and substances and hazardous substances are identified and followed $ Handling procedures for different classes and characteristics of goods are followed
Select handling and storage techniques	$ Accident reporting processes are identified $ Emergency equipment is checked for compliance with regulations $ Storage areas checked for conformity to regulations in accordance with workplace documentation $ Load handling and shifting procedures are selected in accordance with requirements for particular goods $ Handling equipment is checked for conformity with regulations $ Suitable signage is checked for compliance with regulations
Handle dangerous goods	$ Relevant regulations and workplace procedures regarding handling and storage of dangerous goods are followed $ Co-storing precautions are implemented to accord with regulations

UNIT	Handle hazardous substances/dangerous goods
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	

Job role context	Work is governed by the legislation and regulatory framework from which workplace procedures have been established.
	
	Sources of information/documents may include:
	$ HAZCHEM interpretive advice
	$ materials safety data sheets
	$ supplier instructions and information
	$ labels.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify hazardous substances and dangerous goods and handling procedures consistent with workplace policies, relevant legislation and codes of practice
	$ convey information in written and oral form
	$ locate, interpret and apply relevant information
	$ contribute to the maintenance of workplace records
	$ identify and safely handle products and materials

	$ apply safety precautions appropriate to the task.
Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ estimation of size, shape and special requirements of loads
	$ identification of container and goods coding and HAZCHEM markings production workflow
	$ impact of hazardous/dangerous goods on work systems and equipment
	$ application of relevant codes of practice and other legislative requirements for hazardous/dangerous goods
	$ identification and correct use of equipment, processes and procedures
	$ planning own work within the scope of responsibilities and competencies including predicting consequences and identifying improvements

Resource implications	Range of hazardous and dangerous goods relevant to the production area

Consistency in performance may include	Contributes effectively to workplace consultative relationships
	
	Adapts activities to cater for variations in workplace contexts and environment
	
	Shows evidence of application of relevant workplace procedures including:
	$ hazard policies and procedures
	$ assessment of suitability of equipment used and work processes selected
	$ issue resolution procedures
	
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on the job or in an industry simulated facility

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	3	3	2	3	2

UNIT	Conduct operations in confined or restricted spaces PMB OHS03 A
FIELD	Occupational health and safety
DESCRIPTION	This unit relates to the safe and effective conduct of operations in confined spaces.

Element	Performance criteria
Identify risks and required operations in restricted or confined spaces	$ Requirements for the operation are assessed from workplace documentation or order forms $ Potential risks or hazards to self, the environment or others are identified $ Relevant information including workplace procedures and safety codes are identified and read $ Workplace and personal protection equipment and consumables are identified $ Requirements are assembled in accordance with national standards, safety codes and workplace procedures $ Work is planned identifying: - sequence - precautions for self, others and work area - relevant workplace procedures to be followed - emergency precautions, tests and procedures - evacuation and rescue procedures $ (Any) required permits are obtained
Conduct required operation in confined space	$ Unauthorised persons are removed from the work area $ Engineering and personal safety equipment are used in accordance with the relevant Australian Standard $ Relevant documentation is completed $ Equipment used for the process is checked and stored appropriate for operational readiness $ Worksite is checked and returned to operational status

UNIT	Conduct operations in confined or restricted spaces
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Operations may include housekeeping, cleaning, painting, repairing or conducting cyclical maintenance. Work is conducted consistent with workplace procedures and code of conduct requirements. Sources of information / documents may include the Australian Standard AS2865 - Safe Working in a Confined Space code.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ follow the designated work plan for the job
	$ plan ,use and effect emergency and rescue operations$ test for contaminant gases
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task

Interdependent	This unit of competency may be assessed in conjunction with other units that form part of a

assessment of units	job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ estimation of size, shape and special requirements of loads
	$ identification of container and goods coding and HAZCHEM markings
	$ production workflow and requirements for operations in confined spaces
	$ focus of operation of work systems and equipment
	$ application of relevant agreements, codes of practice and other legislative requirements
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Enclosed work area, test equipment for atmosphere, appropriate partners and equipment to meet the required Australian Standard and workplace procedures for confined spaces

Consistency in performance may include	Establishes effective working relationships with colleagues
	
	Modifies activities to cater for variations in workplace contexts and environment
	
	Operations cause no damage to self, area cleaned, or environment.
	
	Work is conducted safely
	
	Shows evidence of application of relevant workplace procedures including:
	$ the use of personal protective clothing and equipment conforming to Industry Standards according to the nature of the task
	$ hazard identification
	$ hazard policies and procedures
	
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on the job or in an industry simulated facility

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	2

UNIT	Apply emergency/incident procedures PMB OHS04 A
FIELD	Occupational health and safety
DESCRIPTION	This unit covers the response of employees to incidents which result in accidents, near miss or emergencies in the workplace.

Element	Performance criteria
Respond to the incident	$ Type of incident or emergency is identified and reported $ Workplace procedures for the emergency are followed $ Details of the cause(s) effects of the incident are identified and reported $ Assistance requirements for accidents and emergencies are clarified and reported immediately to the appropriate parties $ Requests for assistance are made to relevant personnel and emergency services
Control and assist at	$ Site is controlled and protected until the arrival of authorised personnel

accident or emergency site	$ Assistance is provided to injured persons, within the limitations of duty of care and workplace procedures $ Risks are managed within hierarchy of control procedures $ Relevant authorities at the site are cooperated with and assisted within enterprise policies
Finalise emergency/ accident process and complete records	$ Relevant information is exchanged in accordance with State/Territory law and enterprise procedures $ Information is provided to assist in completion of documentation and reports $ Workplace documentation is completed and processed in accordance with workplace or regulatory requirements

UNIT	Apply emergency/incident procedures
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Action is taken within organisational policies and procedures to minimise risks to self, colleagues, customers, the workplace and the environment. Sources of information/documents may include: $ Australian Standard AS1885.1 $ first aid requirements in relevant legislation.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify appropriate action to access the situation and provide assistance
	$ provide customer/client service and work effectively with others
	$ convey information in written and oral form
	$ use appropriate workplace language and communication technologies $ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ application of relevant agreements, codes of practice and other legislative requirements in relation to incidents and accidents
	$ identification and correct use of equipment, processes and procedures
	$ planning own work within the scope of responsibilities and competencies including predicting consequences and identifying improvements

Resource implications	Access to real or simulated incident
Consistency in performance may include	Contributes effectively to workplace consultative relationships Modifies activities to cater for variations in workplace contexts and environment Shows evidence of application of relevant workplace procedures including: $ procedures to access to first aid and emergency response employees

	$ reporting requirements for incidents and emergency situations Action taken promptly to report accidents and incidents within regulatory requirements and following workplace procedures Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in an industry simulated facility

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	2	3	3

UNIT	Supervise emergency/incident situations PMB OHS05 A
FIELD	Occupational health and safety
DESCRIPTION	This unit covers the supervision of accident/emergency procedures, in response to being notified of an incident.

Element	Performance criteria
Respond to accident/emergency situation	$ Details of incidents, accidents and emergencies are received, analysed and confirmed $ Immediate coordination requirements and any required shut downs are identified and actioned in accordance with organisation procedures $ Travel to the accident/emergency site is by the shortest, fastest, legal means and routes
Conduct on-site activities	$ Control of site activities is assumed on arrival and employees or contractors present are informed of this action $ Assistance is provided to clients and operators within the limitations of duty of care and organisation requirements $ Details of personnel, including names and nature of injuries are notified to relevant personnel following enterprise procedures $ Control is relinquished and assistance is provided to relevant authorities within legal and policy limitations
Complete follow-up actions	$ Details of affected personnel, including names, nature of injuries and follow-up treatments, are notified to next-of-kin in accordance with workplace procedures $ Accident/emergency is investigated and a report, including recommendations, is completed in accordance with enterprise policies and procedures $ Notification/reports are made to relevant authorities where appropriate $ Accident procedures and emergency plans are reviewed for effectiveness and recommendations for changes are prepared and submitted to appropriate persons

UNIT	Supervise emergency/incident situations

Range of variables	
This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Actions are taken within organisational policies, procedures and appropriate delegations. Appropriate control of activities and coordination of resources minimises risks to the organisation, individuals and the environment.

	Consultative processes may involve external authorities and emergency services personnel. Sources of information/documents may include the Australian Standard 1885.1.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ respond to the incident and assess appropriate, prompt actions
	$ comply with organisational procedures, admission of liability policy, legal and coordination requirements
	$ render assistance and use control at the scene
	$ isolate affected area and coordinate safety of the scene
	$ investigate and report on accident/emergency situation
	$ resolve coordination issues with other organisations and operators
	$ use appropriate workplace language and communication technologies
	$ locate, interpret and apply relevant information
	$ maintain workplace records and record incident details in accordance with workplace procedures
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ means to control and organise the accident scene, provide practical assistance and cooperate with others at the scene$ consider implications of production workflow in relation to the incident/emergency and related OH&S priorities
	$ focus of operation of work systems and equipment
	$ application of relevant agreements, codes of practice and other legislative requirements in relation to incidents and accidents
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to real or simulated accident scene and procedures
Consistency in performance may include	Establishes effective workplace consultative procedures Adapts activities to cater for variations in workplace contexts and environment Supervises and controls situations to minimise safety risks and maximise positive outcomes

	for employees, workplace and other affected persons/organisations
	
	Shows evidence of application of relevant workplace procedures including:
	$ procedures to access external emergency response personnel
	$ reporting requirements for incidents and emergency situations
	
	Action taken promptly, with reports completed within regulatory requirements and following workplace procedures
	
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on the job or in an industry simulated facility.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	2	2	2

UNIT	Apply first aid in the workplace PMB OHS06 A
FIELD	Occupational health and safety
DESCRIPTION	Basic knowledge and skills to provide first aid in the workplace

Element	Performance criteria
Identify first aid needs	$ The safety of injured person, bystanders and self in an accident situation is assessed in accordance with first aid procedures $ The condition of the injured or ill person is assessed in accordance with first aid procedures
Respond to first aid need within limitations of duty of care	$ Common injuries and minor disorders are correctly managed until medical assistance is available in accordance with first aid procedures $ Emergency is dealt with effectively in accordance with company procedures $ One person and two person cardio pulmonary resuscitation (CPR) is performed following safety procedures $ Appropriate techniques for moving sick /injured persons are used

UNIT	Apply first aid in the workplace
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	First aid is performed within relevant legislative requirements and company policies and procedures including any duty of care provisions within the relevant legislation. Accident situations may include shock, soft tissues injuries, fractures, burns and scolds, electric shock, external haemorrhage, spinal injury, eye injuries, open wounds, breathing difficulties, nausea, venomous bites, collapsed or unconscious patient. Sources of information/documents may include: $ first aid requirements in relevant legislation.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ conduct first aid procedures within State/Territory legislation
	$ work effectively with colleagues
	$ identify vital signs and monitor condition of patient
	$ apply EAR and CPR
	$ control bleeding
	$ comfort and support the patient
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ production work requirements and the likely sources of injury or illness
	$ focus of operation of work systems and equipment

	$ application of relevant agreements, codes of practice and other legislative requirements in relation to first aid
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to real or simulated accident or injury situation

Consistency in performance may include	Establishes effective working relationships with colleagues
	
	Modifies activities to cater for variations in workplace contexts and environment
	
	Appropriate identification of symptoms and appropriate first aid treatment
	
	Referrals to appropriate internal personnel or external medical services made when required
	
	Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others
	
	Shows evidence of application of relevant workplace procedures including:
	$ procedures to access support from other first aid personnel or external providers
	$ reporting requirements for incidents and emergency situations
	
	Action taken to promptly complete reports within regulatory requirements and following workplace procedures
	
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on the job or in an industry simulated facility within the context of the relevant first aid legislative requirement.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	2

UNIT	Implement and monitor occupational health and safety procedures PMB OHS07 A
FIELD	Occupational health and safety
DESCRIPTION	This unit describes the requirements for workers with some supervisory responsibility for implementation and monitoring of occupational health and safety policies, procedures and systems.

Element	Performance criteria
Access and provide information about	$ Relevant provisions of occupational health and safety legislation and codes of practice are accurately followed

occupational health & safety and the workplace policies and procedures	$ Information on workplace occupational health and safety policies and procedures is stored in a readily accessible location and manner $ Information is accurately and clearly explained to the work group $ Information about the outcomes of hazard identification, risk assessment and control procedures is provided to appropriate personnel
Implement and monitor procedures for identifying and assessing hazards	$ Existing and potential hazards in the work area are identified and reported $ Identified hazards are assessed in relation to relative risk
Implement and monitor procedures for controlling risks	$ Existing risk control measures are implemented, monitored, and reviewed $ Adherence to work procedures to control risks is monitored $ Required improvements to existing risk control measures are identified including required resources for implementation, and reported to appropriate personnel $ Procedures for monitoring and controlling risks provide for a hierarchy of control
Implement and monitor procedures for dealing with hazardous events	$ Workplace procedures for dealing with hazardous events are implemented whenever necessary to ensure that prompt control action is taken $ Hazardous events are investigated to identify causes $ Control measures are implemented to prevent recurrence and minimise risks of hazardous events or issues are referred to designated personnel for implementation

UNIT	Implement and monitor occupational health and safety procedures

Range of variables	
This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Operational checks for adequate health and safety arrangements, including staff training and the appropriate use of engineering controls and personal protection equipment, are made at the commencement of all work operations according to workplace practices and consistent with occupational health and safety authority recommendations. $ Procedures implemented may impact on: - customers, members of the public, contractors and staff - number of designated work groups and hazard types - varying degrees of specification in procedures. $ Sources of information/documents may include workplace policies for occupational health and safety.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ convey information in written and oral form
	$ obtain permission for any changes to work practices and existing policies and procedures
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ follow safe operating procedures appropriate to the task.

Interdependent assessment of units	The unit *Follow occupational health and safety procedures* is a prerequisite for this unit. This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role/function:
	$ application of relevant occupational health and safety legislation, related worker=s compensation and enterprise policies and procedures including:
	- duty of care for those in supervisory positions
	- requirement for the maintenance and confidentiality of records of occupational injury and disease and reporting of accidents and potential risks - regulations and codes of practice in relation to hazards in work area
	- requirement of the legislation on employers, suppliers and contractors
	$ consideration of the implications of production workflow on health and safety of employees
	$ focus of operation of work systems and equipment and related risks
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to workplace policies, legislation and work group or team, access to interpretative advice mechanisms to support decisionmaking
Consistency in performance may include	$ Outcomes reflect fair, consistent and careful coordination of occupational health and safety processes $ Consistently consults with staff, contractors and others to implement occupational health and safety procedures $ Monitors and reports on hazards and risk management $ Recommends improvements to work systems to effect safe work $ Establishes effective workplace consultative relationships $ Adapts activities to cater for variations in workplace contexts and environment $ Shows evidence of application of relevant workplace procedures including: - procedures to improve occupational health and safety conditions - reporting requirements for risk and hazardous situations $ Action taken promptly to complete reports within regulatory requirements and following

	workplace procedures $ Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in an industry simulated facility.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	3	3	3	3	3

UNIT	Organise occupational health and safety PMA OHS08 A
FIELD	Occupational health and safety
DESCRIPTION	This unit describes the requirements for workers with responsibility for organising and reporting occupational health and safety compliance in the workplace.

Element	Performance criteria
Use information about occupational health and safety and the workplace policies and procedures to inform work design and report incidents and potential risks	$ Relevant provisions of occupational health and safety legislation and codes of practice are accurately are interpreted and explained $ Workplace occupational health and safety policies, procedures and programs are promoted to employees in the relevant workgroup $ Implications of risks and requirements for safe work are accurately and clearly explained to the work group $ Consultative processes are used in the workplace to improve Health and Safety $ Outcomes of consultative processes are communicated to work group(s)
Use procedures for identifying and assessing hazards	$ Existing and potential hazards in the work area are identified through audit, monitoring of processes, equipment and products used, and in response to employee complaints and questions $ Emergency equipment and procedures are checked for compliance with regulations $ Load handling equipment and procedures are checked for conformity to regulations $ Identified hazards are assessed in accordance with regulatory requirements $ Priorities for hazard resolution are established and reported to appropriate personnel
Negotiate to control risks and resolve complaints about health and safety of employees at work	$ Risk control measures are recommended, monitored and possible improvements identified $ Required improvements to existing risk control measures are identified and reported $ Required resources for implementation are established and reported to appropriate personnel $ Negotiations with employers and employees to revise work procedures are conducted within workplace issue resolution procedures
Use occupational health & safety procedures & legislative mechanisms to formally institute risk management strategies	$ Workplace procedures for hazard, accident and incident reporting are used $ Cooperative working relationships with other employees and external authorities involved in occupational health & safety procedures are established and maintained $ Legislative provisions for improvement notices and inspections are followed

UNIT	Organise occupational health and safety
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Responsibilities for organisation of occupational health & safety have been delegated to this position through workplace employer nomination or a legislative based representation function. $ Sources of information/documents may include applicable State, Territory or Commonwealth legislation and regulations which relate to: - occupational health & safety regulations and legislation including codes of practice - manual handling, rehabilitation, confined spaces, noise, ergonomics, dangerous goods - environment protection legislation - workplace relations Act(s) - worker=s compensation. $ Hazards may include: - confined spaces - ergonomics - rehabilitation - smoke free environment - noise - first aid.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ use appropriate workplace language and communication technologies
	$ locate, interpret and apply relevant information
	$ maintain workplace records for occupational health and safety
	$ workplace consultative processes are used to resolve health and safety issues
	$ work effectively with others
	$ follow relevant sections of the occupational health & safety legislation including:
	- clauses relating to occupational health and safety representatives & inspections
	- requirements for general duty of care
	- issue resolution procedures
	- requirements on employers, employees, suppliers and contractors
	- regulations and codes of practice relevant to the work area covered
	$ follow workplace requirements for reporting of accidents and potential risks and the maintenance and confidentiality of records
	$ conduct negotiations with employees, contractors and others
	$ monitor implementation of occupational health & safety procedures
	$ recommend improvements to work systems for management of risk.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ application of workplace issue resolution procedures
	$ identification of potential risks and possible resolutions
	$ production workflow and the relationship to occupational health and safety risks
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource	Access to occupational health and safety legislation, procedures, relevant employees and

implications	management structures
Consistency in performance may include	Establishes effective working and consultative relationships with colleagues Adopts activities to cater for variations in workplace contexts and environment Work indicates the significance for the workplace and employees of appropriate practice of occupational health and safety in relation to business effectiveness, employee satisfaction & competitive advantage Outcomes reveal fair, consistent and careful coordination of occupational health and safety processes Reports completed within regulatory requirements and following workplace procedures Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on the job or in an industry simulated facility.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	3	3	3

UNIT	Develop and maintain a safe workplace PMB OHS09 A
FIELD	Occupational health and safety
DESCRIPTION	This unit applies to employees required to implement occupational health and safety requirements set down in legislation, standards and the organisation=s policies and practices. A key component of this role is promoting and monitoring a safe workplace and environment.

Element	Performance criteria
Access and share legislation, codes and standards	$ Legislation, standards and the organisation=s policies and practices relevant to the creation and maintenance of a safe workplace and environment are made available to individuals/teams $ Arrangements are made to provide information in a language, style and format which is understood by colleagues $ Individuals/teams know their legal responsibility for maintaining a safe workplace and environment $ The implications of an unsafe workplace and environment is clear to all within the workplace
Plan and implement safety requirements	$ Health and safety risk assessments are made as part of all production planning exercises $ Policy and procedures are developed to implement requirements for a safe workplace $ Work practices are planned with colleagues to ensure compliance with workplace and environmental legislation and standards $ Safe operating procedures are documented and communicated $ Work practices are implemented in accordance with requirements specified in legislation and standards for safe workplaces and environments $ Coaching and mentoring supports colleagues in managing their rights and responsibilities $ Purchasing policy provides mechanisms to monitor potential hazards from substances and equipment
Monitor, adjust and report safety performance	$ Actual and potential problems are identified, rectified and reported promptly and decisively to ensure workplace and environmental safety $ Hazards are managed so that risks are minimised $ Waste recycling, reduction and disposal is carried out within legislative and organisational requirements $ Recommendations for improvements to meet legislation and associated standards are submitted to designated persons/groups $ Individuals/teams are informed of improvements and alterations to occupational health and safety procedures in the workplace $ Systems, records and reporting procedures are maintained according to legislative requirements
Investigate and report non-conformance	$ Non-conformance is investigated and dealt with according to legislative requirements $ Coaching and mentoring supports colleagues to acquire and apply competencies to meet legislative requirements and the associated standards $ Workplace practices are implemented to ensure that non-conformance is not repeated
Evaluate the occupational health and safety system and related policies,	$ The effectiveness of the occupational health and safety system and related policies, procedures and programs is assessed $ Improvements to the occupational health and safety system are identified and reported to appropriate personnel

procedures and programs	

UNIT	Develop and maintain a safe workplace

Range of variables

This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity.

The common range of variables should be used to assist in planning assessment and training activities.

Job role context	Operates under general guidance on progress and outcomes of work.
	
	Exercises some discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes. A range of learning opportunities may be used to develop colleagues to implement occupational health and safety procedures, including mentoring, coaching, action learning, exchange/rotation and structured learning programs.
	
	May have responsibility for others individually or in teams
	
	Work is performed within defined area of responsibility where the process for consultation may include:
	$ occupational health and safety committee
	$ consultation with heath and safety representatives
	$ issue resolution procedures
	$ participative and consultative procedures as required by legislation, Awards and workplace agreements$ those staff responsible for work activities which may produce changes to the workplace and additional hazards
	$ emergency services personnel.
	
	Sources of information/documents may include applicable State, Territory or Commonwealth legislation and regulations which relate to:
	$ occupational health & safety regulations and legislation including codes of practice
	$ manual handling, rehabilitation, confined spaces, noise, ergonomics, dangerous goods
	
	$ environment protection legislation
	$ workplace relations Act(s)
	$ worker=s compensation.

Evidence guide	
Critical aspects of	Assessment must confirm appropriate knowledge and skills to:

evidence to be considered	$ evaluate policies and procedures
	$ apply risk management processes to improve workplace procedures
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ use workplace consultative processes to improve health and safety
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task
	$ explain safety legislation, standards and procedures
	$ negotiate with appropriate personnel to improve workplace health, safety and welfare.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. The unit *Follow occupational health & safety procedures* is a prerequisite.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ production workflow in relation to potential health and safety risks
	$ focus of operation of work systems and equipment
	$ application of relevant agreements, codes of practice and other legislative requirements
	$ relevant occupational health and safety legislation and codes of practice
	$ the systems of risk control recognising the significace of occupational health and safety in relation to for effective workplace operation$ the significance of other management systems and procedures for occupational health and safety
	$ the particular technical and people management requirements of the specific work area
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to relevant legislation and procedures, issues resolution processes and negotiation arenas

Consistency in performance may include	Establishes effective working relationships with colleagues
	
	Modifies activities to cater for variations in workplace contexts and environment
	
	Consistent application of relevant State, Territory and Commonwealth occupational health and safety legislation, and codes of practice, particularly:
	$ general duty of care
	$ requirements for the maintenance of confidential records of occupational injury and disease
	$ provision of information, training and assessment
	$ issue resolution, counselling and disciplinary processes
	
	Evaluations and system improvement processes improve health, safety and welfare outcomes

	Workplace procedures comply with regulatory and legislative requirements for duty of care, training, supervision and technical compliance Promptly reports and rectifies non-compliance within regulatory requirements and following workplace procedures
Context for assessment	Assessment may occur on the job or in an industry simulated facility.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	3	3	3

UNIT	Organise operations in confined or restricted spaces PMB OHS10 A
FIELD	Occupational health and safety
DESCRIPTION	This unit relates to the safe and effective conduct of operations in confined spaces.

Element	Performance criteria
Identify risks and plan operations for confined or restricted spaces	$ Work requirements for operations in confined spaces are identified from production or maintenance schedules $ Potential risks and hazards to the environment, operators in confined spaces and production schedules are identified from site inspection, relevant regulations and workplace procedures $ Operations are planned consistent with the relevant regulations, Australian Standards and workplace policies and procedures identifying appropriate personnel and procedures to be followed $ Training requirements for personnel are assessed in accordance with the regulations and Australian Standards and organised
Monitor compliance with regulatory and workplace requirements	$ Operational plan is checked for compliance with regulations $ Work undertaken follows operational plan and complies with safety codes $ (Any) test results are checked for conformity with specifications $ Where required remedial action is taken $ Feedback to operational plan or conduct of work $ Equipment used is checked for compliance with the relevant Australian Standards and specifications
Complete required documentation	$ Reports of testing completed work and recommendations for further action are completed $ Records are distributed and filed in accordance with workplace procedures

UNIT	Organise operations in confined or restricted spaces
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Operations in confined spaces planned may include housekeeping, cleaning, painting,

	repairing or conducting cyclical maintenance. Work is conducted consistent with workplace procedures and code of conduct requirements. Sources of information / documents include the Australian Standard AS2865 - Safe Working in a Confined Space code.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ design work plan for the job which meet Australian Standards and workplace procedures
	$ monitor emergency and rescue operations$ interpret tests for contaminant gases
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ audit compliance with the regulations
	$ identify safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ estimation of size, shape and special requirements of loads
	$ identification of container and goods coding and HAZCHEM markings
	$ production workflow and requirements for operations in confined spaces
	$ focus of operation of work systems and equipment
	$ application of relevant regulations and workplace procedures
	$ identification and correct use of equipment, processes and procedures
	$ planning work in confined spaces including predicting consequences and identifying improvements

Resource implications	Test equipment for atmosphere, appropriate personnel and equipment to meet the required Australian Standard and workplace procedures for confined spaces, actual or simulated situation where confined space work is required

Consistency in performance may include	Establishes effective working relationships with colleagues
	
	Provide leadership and direction to carry out work in confined spaces
	Modifies activities to cater for variations in workplace contexts and environment
	
	Operations cause no damage to self, area cleaned, or environment.
	
	The developed operational plan and relevant supervision provides for safe work
	
	Shows evidence of application of relevant workplace procedures including:
	$ hazard identification
	$ hazard policies and procedures
	
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on the job or in an industry simulated facility.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	2	3	3	2	3	3

UNIT	Complete workplace documents PMB COMM01 A
FIELD	Communications
DESCRIPTION	This unit applies to employees who are required to apply basic knowledge and skills to enable the completion of work related documents.

Element	Performance criteria
Select appropriate workplace document	$ Workplace documentation is accessed $ Appropriate form/document is selected for the required report $ Provisions are made for copies as required by workplace procedures
Complete forms	$ Work related forms are completed in accordance with enterprise policies and procedures $ Copies are submitted to appropriate personnel and where required personal copies filed
Complete reports	$ Relevant information collected and assembled in logical order $ Document structure is planned and drafted $ Work is checked for accuracy, logical sequence and appropriate spelling and grammar $ Final copy of document submitted (and personal copy filed where appropriate)

UNIT	Complete workplace documents
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Forms and reports completed may include incident/accident reports, production reports, packing or other goods transfer documentation. Reporting may be in hard copy or electronic form.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ use relevant charts, forms and proformas
	$ locate and interpret appropriate workplace forms and standard formats
	$ organise information into a logical sequence
	$ use appropriate spelling and grammar conventions
	$ convey information in written or oral form
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ use spell checkers, dictionaries or other forms of writing aids
	$ interpret questions and workplace document requirements and respond appropriately
	$ retrieve information from print and electronic storage systems
	$ focus of operation of work systems and equipment
	$ identification and correct use of information technologies, equipment, processes and

	procedures
	$ planning own work including predicting consequences and identifying improvements
	$ conventions for sentence construction, grammar, style and punctuation

Resource implications	Access to workplace information and forms
Consistency in performance may include	Establishes effective working relationships with colleagues Documents are checked for errors and compliance with workplace procedures Modifies activities to cater for variations in workplace contexts and environment Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	1	1	1

UNIT	Collect and present workplace data and information PMB COMM02 A
FIELD	Communications
DESCRIPTION	This unit applies to employees involved in the collection of information in the workplace.

Element	Performance criteria
Required information is identified	$ Purpose of the data collection is identified $ Sources of information are established $ Appropriate information is collected
Prepare information for use	$ Information is collated and presented in a logical manner $ Checks for accuracy are made
Explain information	$ Data collection is explained to others so that the information contributes to the workplace operations $ Questions are answered and appropriate clarifications made
Present workplace information	$ Information is forwarded to appropriate personnel in accordance with company procedures $ Information is collated and stored in accordance with company procedures

UNIT	Collect and present workplace data and information
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Work involves collecting, collating and presenting information in written, oral or electronic form.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ locate, sort, collate and interpret relevant information from a range of sources
	$ use appropriate workplace language and communication technologies
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ requirements of organisation for information
	$ focus of operation of work systems and equipment$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Range of information to be collated and presented
Consistency in	Establishes effective working relationships with colleagues

performance may include	Modifies activities to cater for variations in workplace contexts and environment Consistently organises information and presents it in a form appropriate for the workplace purpose Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	1	1	2	2

UNIT	Participate in interactive workplace communication PMB COMM03 A
FIELD	Communications
DESCRIPTION	This unit applies to personnel required to participate in interactive workplace communications.

Element	Performance criteria
Communicate information about tasks, processes, events or skills	$ Communication medium is selected to meet the purpose required $ Multiple operations involving several topics/areas are communicated $ Effective listening skills are demonstrated $ Questions are used to gain additional information $ Sources of information relevant to the communication are identified $ Information is selected and sequenced correctly $ Verbal and written communication undertaken where required $ Communication is undertaken in both familiar and unfamiliar situations and with familiar and unfamiliar individuals and groups
Participate in group discussions to achieve appropriate work outcomes	$ Responses are sought and provided to others in the group $ Constructive contributions are made in terms of the process involved $ Goals or outcomes are communicated and/or recorded
Represent the views of the group to others	$ Views and opinions of others are understood and accurately reflected $ Presentations present the group position accurately

UNIT	Participate in interactive workplace communication

Range of variables

This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity.

The common range of variables should be used to assist in planning assessment and training activities.

Job role context	Communications may be with other employees, supervisors or customers, and are a two way process.

Evidence guide

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ use appropriate workplace language including body language and communication technologies
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ scope of authority of position and communication lines in the organisation
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Instructions/messages to communicate, communication systems and equipment
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Consistently shows use of appropriate communication strategies in workplace settings Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	2

UNIT	Apply measurement and calculations to workplace activities PMB CALC01 A
FIELD	Calculations
DESCRIPTION	This unit applies to employees who are required to apply basic knowledge and skills to perform routine measurements and calculations for industry related operations.

Element	Performance criteria
Select measuring equipment and calculation method	$ Units of measurement for time, linear measurement, number, mass, pressure, speed, volume and related measuring equipment are identified $ Measuring equipment and units of measurement appropriate for the task are selected $ Dimensions to be measured are identified from specifications and work procedures $ Appropriate equipment features and/or scales are selected for the required process $ Mathematical process required to complete the task is selected
Interpret graphical representations of mathematical information	$ Information presented in mathematical symbols, diagrams and pictorial representations is recognised, interpreted and used to complete workplace tasks
Carry out measurement and calculations	$ Appropriate measurement tools are selected $ Calculations needed to complete work tasks are performed using the four basic processes of addition, subtraction, multiplication and division $ Calculations involving fractions, percentages and mixed numbers are used to complete workplace tasks $ The functions of a calculator are used to perform workplace tasks $ Numerical information is self-checked and corrected for accuracy $ Instruments are read to the limit of accuracy of the tool
Prepare estimates	$ Quantities of materials and resources required to complete a work task are estimated $ The time needed to complete a work activity is estimated $ Accurate estimates for work completion are made

UNIT	Apply measurement and calculations to workplace activities
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Measurements and calculations may be required for equipment readouts, materials formulation and mixing, loading and transferring materials and goods, and checking products against specifications using Ago@ and Ano-go@ gauges, jigs, templates, scales, verniers, micrometers and/or rules.Calculations including money, volume, weight, time, distance and perimeter.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select appropriate mathematical process
	$ select appropriate mechanical and electronic aids including calculators and computers
	$ use appropriate workplace language and communication technologies
	$ locate, interpret and apply relevant information
	$ maintain workplace records

	$ identify and safely handle products and materials $ apply safety precautions appropriate to the task
Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ application of mathematical procedures including addition, subtraction, multiplication, division, percentages and fractions
	$ metric and where required, imperial measurement systems
	$ use, dial, scale and digital readouts
	$ read and interpret mathematical specifications or job instructions
	$ production workflow
	$ focus of operation of work systems and equipment
	$ application of relevant agreements, codes of practice or other legislative requirements
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to workplace information and forms

Consistency in performance may include	Establishes effective working relationships with colleagues
	
	Modifies activities to cater for variations in workplace contexts and environment
	
	Appropriate calculation methods used within normal job role with accurate results
	
	Shows evidence of application of relevant workplace procedures including:
	$ hazard policies and procedures
	$ issue resolution procedures
	$ job procedures and work instructions
	$ guidelines relating to the safe use of machinery and equipment
	$ quality assurance procedures (where existing)
	$ security procedures
	$ housekeeping processes
	$ waste, pollution and recycling management processes
	
	Action taken promptly - accidents and incidents reported within regulatory requirements and following workplace procedures
	
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	1	1	2	2	1

UNIT	Interpret and use workplace statistical information PMB CALC02 A
FIELD	Calculations
DESCRIPTION	This unit applies to employees required to identify, use and manipulate statistical information.

Element	Performance criteria
Identify situations where statistics are used in the workplace	$ Types of statistical representations of data used in the workplace are identified $ Users of statistical data in the workplace are identified $ Statistical data representations are matched for applications to: - monitoring work flow - inventory and stock levels - customer surveys - supplier and market analysis
Collect numerical data	$ Purpose of data collection is identified $ Sources of information are established $ Data collection methods are used $ Mathematical processes are used to arrange data $ Data collected is checked for accuracy $ Potential for inaccurate results arising from variables is estimated and described
Use calculations to present data for analysis	$ Data collected is represented on graphs, tables, averages and percentages as required $ Spreadsheets, flow charts and/or graphs are used to present data
Interpret trends and patterns from numerical data	$ Non-conforming results outside of the predicted outcome are noted and reasons identified $ Trends or patterns in data are noted $ Possible reasons for trends or patterns are generated $ Potential solutions are identified

UNIT	Interpret and use workplace statistical information
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	This unit of competency requires the application of knowledge of production process and statistical presentation to assist in identification of non-conforming product, production processes, services or organisational performance.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ identify and read graphs, charts, tables and statistical results
	$ interpret statistical data
	$ use statistical data representations to explain production inputs/processes and/or outcomes
	$ use appropriate workplace language and communication technologies
	$ locate, interpret and apply relevant information

	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task
	$ convey information in written and oral form
	$ use statistics for workplace application

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ mathematical calculations including:
	- addition
	- subtraction
	- multiplication
	- division
	- percentage
	$ production workflow
	$ focus of operation of work systems and equipment
	$ application of relevant agreements, codes of practice or other legislative requirements
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Range of statistical data, graphical, tabular and spreadsheet presentation

Consistency in performance may include	Establishes effective working relationships with colleagues
	
	Modifies activities to cater for variations in workplace contexts and environment
	
	Statistical information is interpreted accurately
	
	Shows evidence of application of relevant workplace procedures including:
	$ hazard policies and procedures
	$ issue resolution procedures
	$ job procedures and work instructions
	$ guidelines relating to the safe use of machinery and equipment
	$ quality assurance procedures (where existing)
	$ security procedures
	$ housekeeping processes
	$ waste, pollution and recycling management processes
	
	Action taken promptly - accidents and incidents reported within regulatory requirements and following workplace procedures
	
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	3	3	3

UNIT	Use precision measuring equipment PMB CALC03 A
FIELD	Calculations
DESCRIPTION	This unit applies to employees required to perform fine measurement procedures using precision equipment.

Element	Performance criteria
Identify appropriate measurement procedures	$ Units for precision measurement are identified $ Measuring equipment appropriate for the task are selected $ Dimensions to be measured are identified from specifications and work procedures $ Appropriate equipment features/scales are selected for the process $ Mathematical processes required to complete the task are selected
Check calibration of equipment	$ Calibration checks are identified $ Equipment is checked for calibration/zero $ Calibration is checked against specification for range of measurement and scale.
Carry out measurements and calculations	$ Appropriate measuring instruments are selected $ Calculations needed to complete the work tasks are performed $ Numerical information is self-checked and corrected for accuracy $ Instruments are read to the limit of accuracy of the tool and matched to specification.

UNIT	Use precision measuring equipment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Work involves the selection and use of precision equipment, fine measurement and the checking of results against specifications. Equipment may include dial gauges, slip gauges, laser equipment and other metrology tools.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select and use metrology equipment
	$ check that appropriate equipment calibration has been completed
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ application of mathematical processes
	$ use dial, scale and digital read-outs
	$ production metrology requirements and impact on product quality standards of inaccurate

	measurement
	$ focus of operation of measuring systems and equipment
	$ application of quality and legislative requirements
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to precision measuring equipment, items for measurement and specifications
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work consistently shows the selection and use of appropriate measuring instruments, relevant scales and self checking of instruments Shows evidence of application of relevant workplace procedures including process measurement stages and expected results Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	3	3	3

UNIT	Provide service to customers PMB CUST01 A
FIELD	Customer service
DESCRIPTION	This unit applies to employees who provide service to internal and external customers.

Element	Performance criteria
Deal with customer inquiries	$ Customer inquiries are dealt with courteously and efficiently $ Questions are used to clarify the customer=s needs or concerns $ Assistance from other staff is sought when a customer= s inquiry cannot be fully answered $ Knowledge of processes, materials, products, services and/or operations is used to answer customer queries or requests $ Customer inquiries and associated action are recorded and reported in accordance with workplace procedures $ Customer requests are dealt with promptly minimising delays in meeting requests within appropriate work standards
Handle customer complaints and concerns	$ Customer complaints and concerns are listened to carefully and issues raised are investigated $ Possible solutions are considered for feasibility and recommendations for remedies within the employees scope of authority are made $ Details of customer complaints are reported consistent with workplace procedures $ Issues requiring decisions or action by others are referred following workplace procedures
Monitor customer satisfaction	$ Customer requirements are dealt with according to workplace procedures $ Feedback to managers and customers (internal and external) is provided on customer satisfaction and concerns $ Feedback is solicited from customers to ensure that customer needs are met

UNIT	Provide service to customers
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Customer service activities are governed by accepted workplace practices and involve interactions with both internal and external customers.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ provide customer/client service to internal and external customer
	$ work effectively with colleagues
	$ convey information in written and oral form
	$ respond positively to adverse feedback from customers$ assist in resolution of customer problems
	$ identify and suggest improvements to customer service
	$ locate, interpret and apply relevant information
	$ maintain workplace records for customer service reports and information on products or services
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ production workflow and the relationship of the production process and workplace services to customers (internal and external)
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ workplace procedures for reporting customer concerns
	$ making positive reactions to adverse feedback from customers
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to customer service situations into internal or external customers as appropriate

Consistency in performance may include	Establishes effective working relationships with colleagues
	
	Modifies activities to cater for variations in workplace contexts and environment
	
	Customer service to internal and external customer reflects individual and workplace customer focus
	
	Recognises and adapts appropriately to cultural differences in the workplace including modes of behaviour and interactions among staff and others
	
	Shows evidence of application of relevant workplace procedures including:
	$ issue resolution procedures
	$ job procedures and work instructions
	
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	2

UNIT	Coordinate quality customer service PMB CUST02 A
FIELD	Customer service
DESCRIPTION	This employee is required to ensure that products and services are delivered and maintained to standards agreed by the organisation and the customer. This will be carried out in the context of the organisation=s policies and practices as well as legislation, conventions and codes of practice.

Element	Performance criteria

Plan to meet internal and external customer requirements	$ The needs of customers are researched, implications for the organisation are assessed $ Information on customer requirements is included in the planning process $ Provision is made in plans to achieve the quality, time and cost specifications agreed with customers
Ensure delivery of quality products/services	$ Products/services are delivered to customer specifications within the team=s/organisation=s business plan $ Individual/team performance consistently meets quality, safety, resource and delivery standards $ Coaching and mentoring assists colleagues overcome difficulty in meeting customer service standards
Monitor, adjust and report customer service	$ The organisation=s systems and technology are used to monitor progress in achieving product/service targets and standards $ Customer feedback is sought and used to improve the provision of products/services $ Resources are used effectively and efficiently to provide quality products/services to customers $ Decisions to overcome problems with products/services are taken in consultation with designated individuals/groups $ Adjustments are made to products/services, and those who have a role in their planning and delivery are informed of changes $ Records, reports and recommendations are managed within the organisation=s systems and processes

UNIT	Coordinate quality customer service
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Operates under general guidance on progress and outcomes of work. Exercises some discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes $ May have responsibility for others individually or in teams
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ manage work to achieve desired required outcomes
	$ operate within budget(s)
	$ identify means to improve service to customers
	$ consult appropriately to introduce (any) required improvements to customer service provision
	$ use information management systems
	$ provide customer/client service and work effectively with colleagues
	$ adapt customer service implementation systems to particular purposes
	$ support group members to implement improved customer service
	$ convey information in written and oral form
	$ locate, interpret and apply relevant information
	$ maintain workplace records

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ identification of customer and market characteristics
	$ identification of the role of customer service in company profitability
	$ production workflow and the relationship to provision of products and services to customers
	$ focus of operation of work systems and equipment
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to customer service situations, policies and staff involved in both internal and external customer service
Consistency in performance may include	Establishes effective working relationships with colleagues

	Modifies activities to cater for variations in workplace contexts and environment
	
	Customer service provisions are known and applied by staff
	
	Regularly seeks customer feedback
	
	Quality customer service provisions operate throughout the relevant work group(s)
	
	Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others
	
	Shows evidence of application of relevant workplace procedures including:
	$ issue resolution procedures
	$ job procedures and work instructions
	$ quality assurance procedures (where existing)
	
	Action taken promptly to complete reports within workplace procedures
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	2	2	3	3

UNIT	Use computers in the workplace PMB COMP01 A
FIELD	Computing technology
DESCRIPTION	This unit applies to employees required to access, input and retrieve data from computer information processing systems.

Element	Performance criteria
Identify computer information equipment and systems	$ Types of computerised equipment used in the work area are identified $ Functions of equipment, component parts and accessories are identified $ Routine faults in operating systems, software applications and operator errors are identified $ Sources of information on rectifying faults and operating equipment, systems and applications are identified
Set up and shut down equipment for use	$ Work station equipment is adjusted to meet ergonomic requirements and appropriate posture is used $ Computer is booted, logged on and checked for viruses (where required) $ Operating manuals and or help screens for equipment and software are used to inform work practices $ Software packages and accessories for required application are selected and accessed $ Required file and/or data to be accessed is identified $ Files/data are saved prior to shut down $ Shut down procedures for files, applications and equipment are followed
Input, retrieve and present files/data	$ Full keyboard and/or mouse is used to input data $ Files are created and/or saved $ Accurate input is confirmed $ Appropriate printers are accessed and print preview facilities used $ Files are transferred from drive to drive within workplace policies and guidelines $ Saved files are accessed through relevant directories $ Information and disk(s) are stored where appropriate

UNIT	Use computers in the workplace
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Equipment may be used for information storage, invoicing, payments, manifests or work organisation. $ Equipment may include personal and main frame computers, data entry systems and work includes accessing and retrieving information. $ Limited discretion required in choosing options for operations. $ Work may be conducted in teams or singly. $ Sources of information/documents may include: - software guides and explanatory texts - software help systems.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ use computerised information processing equipment, software and operating systems
	$ convey information in written and oral form
	$ locate, interpret and apply relevant information

	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ saves documents regularly
	$ proof reads for accuracy
	$ efficiently uses paper and software processes
	$ production workflow in relation to record keeping
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to keyboard, software and related work requirements
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Equipment is maintained and handled to workplace requirements. Work is conducted effectively using appropriate sequences and procedures Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	1	2	1	1	2	2

UNIT	Use information technology devices in the workplace PMB COMP02 A
FIELD	Computing technology
DESCRIPTION	This unit applies to employees who use computers as part of work processes.

Element	Performance criteria
Identify infotechnology system and software application for work role	$ Equipment input systems and software are identified $ Applications for workplace activities of the different infotechnology equipment and related software are explained $ Equipment is set up for work requirements in accordance with company procedures and manufacturer=s guidelines
Input, store and retrieve data	$ Data is entered using appropriate signal equipment, keyboard/mouse or other system $ Data is manipulated to suit work requirements and checked for accuracy (where applicable) $ Data is filed and/or retrieved following company policies
Implement workplace procedures for management and security of data	$ Security procedures are followed as required $ Information systems are managed within company procedures and manufacturer=s guidelines

UNIT	Use information technology devices in the workplace
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Equipment may be used for stock management, information storage, invoicing, payments, manifests or work organisation and may include bar code readers, scanners, radio frequency devices, computers, data entry systems and work includes inputting data $ Limited discretion required in choosing options for operations
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ promote and monitor continuous improvement processes
	$ encourage participation of others in planning and monitoring activities
	$ identify problems and opportunities
	$ use infotechnology equipment to input, access and extract information relevant to work activities
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ equipment use
	$ procedures for fault identification and rectification
	$ production workflow in relation to computer controls and monitoring systems
	$ focus of operation of work systems and equipment

	$ identification and correct use of equipment, processes and procedures $ planning own work including predicting consequences and identifying improvements
Resource implications	Access to infotechnology equipment and work requiring computer operations
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Equipment is maintained and handled to workplace requirements Work is conducted effectively using appropriate sequences and procedures Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	1	2	2	2	2

UNIT	Manage personal work priorities and professional development PMB MANAGE01 A
FIELD	Frontline management
DESCRIPTION	This unit applies to those personnel responsible for managing performance and professional development within the context of the organisation.

Element	Performance criteria
Manage self	$ Personal qualities and performance serves as a role model in the workplace $ Personal goals and plans reflect the organisation=s plans, and personal roles, responsibilities and accountabilities $ Action is taken to achieve and extend personal goals beyond those planned $ Consistent personal performance is maintained in varying work conditions and work contexts
Set and meet own work priorities	$ Competing demands are prioritised to achieve personal, team and the organisation=s goals and objectives $ Technology is used efficiently and effectively to manage work priorities and commitments
Develop and maintain professional competence	$ Personal knowledge and skills is assessed against competency standards to determine development needs and priorities $ Feedback from clients and colleagues is used to identify and develop ways to improve competence $ Management development opportunities suitable to personal learning style(s) are selected and used to develop competence. $ Participation in professional networks and associations enhances personal knowledge, skills and relationships $ New skills are identified and developed to achieve and maintain a competitive edge

UNIT	Manage personal work priorities and professional development
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Operates under general guidance on progress and outcomes of work. Exercises some discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes. A range of learning opportunities may be used to develop self and others including mentoring, coaching, action learning, exchange/rotation and structured learning programs. Sources of information/documents may include: $ Organisational goals, objectives and business plans $ Industry endorsed competency standards and assessment system.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ set realistic and appropriate goals
	$ manage work activities to achieve personal goals and organisational deadlines and targets
	$ identify relevant units of competency and contextualise them for workplace application for own job role
	$ self assess existing competencies and identify opportunities for competency development
	$ use appropriate workplace language and communication technologies
	$ locate, interpret and apply relevant information.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ application of industry endorsed competency standards, assessment system, Training Package learning resources and/or curriculum
	$ implications of future directions of the enterprise and the particular workplace
	$ production workflow and relationships to future work priorities and professional development needs
	$ focus of operation of work systems and equipment
	$ identification and correct use of technology, information systems, equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to industry competency standards and assessment systems and particular workplace development opportunities

Consistency in performance may include	Establishes effective working relationships with colleagues
	
	Modifies activities to cater for variations in workplace contexts and environment
	
	Evaluation of opportunities for competency development results in cost and time effective personal professional development
	
	Outcomes of work are monitored and compared with organisational and personal goals and priorities
	
	Feedback on work quality and performance is sought and suggestions enacted and evaluated
	
	Shows evidence of application of relevant workplace procedures including:
	$ training and assessment policies
	$ issue resolution procedures

Context for assessment	Assessment may occur on or off the job.

Key competencies

Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	2	3	2	2	3	2

UNIT	Establish and manage effective workplace relationships PMB MANAGE02 A
FIELD	Frontline management
DESCRIPTION	This unit applies to employees required to develop and maintain positive relationships in internal and external environments so that customers, suppliers and the organisation achieve planned outputs/outcomes.

Element	Performance criteria
Gather, convey and receive information and ideas	$ Information to achieve work responsibilities is collected from appropriate sources $ The method(s) used to communicate ideas and information is appropriate to the audience $ Communication takes into account social and cultural diversity $ Input from internal and external sources is sought, and valued in developing and refining new ideas and approaches
Develop trust and confidence	$ People are treated with integrity, respect and empathy $ The organisation=s social, ethical and business standards are used to develop and maintain positive relationships $ Trust and confidence of colleagues, customers and suppliers is gained and maintained through competent performance $ Appropriate tasks and responsibilities are delegated to employees and appropriate reporting systems established for the delegations $ Interpersonal styles and methods are adjusted to the social and cultural environment
Build and maintain networks and relationships	$ Networking is used to identify and build relationships $ Networks and other work relationships provide identifiable benefits for the team and organisation
Manage difficulties to achieve positive outcomes	$ Problems are identified and analysed, and action is taken to rectify the situation with minimal disruption to performance $ Colleagues receive guidance and support to resolve their work difficulties $ Continued poor performance is managed within the organisation=s processes $ Conflict is managed constructively within the organisation=s processes $ Difficult situations are negotiated to achieve results acceptable to the participants, and which meet organisation and legislative requirements

UNIT	Establish and manage effective workplace relationships

Range of variables

This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity.

The common range of variables should be used to assist in planning assessment and training activities.

Job role context	Operates under general guidance on progress and outcomes of work. Exercises some discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes May have responsibility for others individually or in teams

Evidence guide

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ manage relationships with internal and external personnel to effectively achieve goals/results
	$ work relationships are improved through constructive and appropriate efforts
	$ use consultative methods and forums to improve work effectiveness
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ production workflow
	$ focus of operation of work systems and equipment
	$ identification and correct use of information systems, technology equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to work team or group and projects requiring workplace and/or external cooperative work efforts
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Work performance strengthens and reinforces work relationships Feedback to others is honest and constructive Responds to problems and difficulties with constructive responses Communication and judgements are open and fair
Context for assessment	Assessment may occur on or off the job.

Key competencies

Collect, analyse & organise	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas &	Solve problems	Use technology

information				techniques		
3	3	3	3	3	3	3

UNIT	Manage operations to achieve planned outcomes PMB MANAGE 03 A
FIELD	Frontline management
DESCRIPTION	This unit applies to those employees required to plan, implement, monitor and record performance to achieve the business plans of the team/organisation. This pivotal role is carried out to create safe, efficient and effective products and services to customer satisfaction within the organisation=s productivity and profitability plans.

Element	Performance criteria
Plan resource use to achieve profit/productivity targets	$ Resource information for use in operational plans is collected, analysed and organised in consultation with colleagues and specialist resource managers $ Operational plans contribute to the achievement of the organisation=s performance/business plan $ Operational plans identify available resources, taking into account customer needs and the organisation=s plans $ Contingency plans are prepared in the event that initial plans need to be varied
Acquire resources to achieve operational plan	$ Employees are recruited,inducted and deployed within the organisation=s human resource management policies and practices $ Physical resources and services are acquired and deployed in accord with the organisation=s practices and procedures
Monitor operational performance	$ Performance systems and processes are monitored to assess progress in achieving profit/productivity plans and targets $ Budget and actual financial information is analysed and interpreted to monitor profit/productivity performance $ Unsatisfactory performance is identified and prompt action is taken to rectify the situation $ Recommendations for variation to operational plans are negotiated and approved by the designated persons/groups

UNIT	Manage operations to achieve planned outcomes
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	Operates under general guidance on progress and outcomes of work. Exercises some discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes. May have responsibility for others individually or in teams. Sources of information/documents may include:$ workplace operating procedures and policies $ supplier and/or client instructions.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ manage work effectively to achieve goals and results
	$ represent others in organisational meetings and consultative forums

	$ contribute to the organisations planning processes
	$ suggest improvements to operations and negotiate changes
	$ use appropriate workplace language and communication technologies
	$ locate, interpret and apply relevant information

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ identify improvements to resource allocation and use
	$ scope of authority of position and relationship to organisational structure
	$ production workflow in relationship to the achievement of workplace business plans and objectives
	$ focus of operation of work systems and equipment
	$ application of relevant agreements, codes of practice or other legislative requirements
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to workplace plans and delegations to enable coordination of resources to complete a project
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Legislative requirements are met in any service or product design or production Supports and promotes learning opportunities for others Acts on advice and provides constructive feedback to others
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	3	3	3

UNIT	Implement and monitor continuous improvement systems and processesPMB MANAGE0
FIELD	Frontline management
DESCRIPTION	This unit applies to those required to manage the continuous improvement process to achieve the organisation=s quality objectives through influencing the ongoing development of the organisation.

Element	Performance criteria
Implement continuous improvement systems and processes	$ Team members are actively encouraged and supported to participate in decision making processes and to assume responsibility and authority $ The organisation=s continuous improvement processes are communicated to individuals/teams $ Mentoring and coaching support ensures that individuals/teams are able to implement the organisation=s continuous improvement processes
Monitor, adjust and report performance	$ The organisation=s systems and technology are used to monitor progress and to identify ways in which planning and operations could be improved $ Customer service is strengthened through the use of continuous improvement techniques and processes $ Plans are adjusted and communicated to those who have a role in their development and implementation
Consolidate opportunities for further improvement	$ Individuals/teams are informed of savings and productivity improvements in achieving the business plan $ Work performance is documented and the information is used to identify opportunities for further improvement $ Records, reports and recommendations for improvement are managed within the organisation=s systems and processes

UNIT	Implement and monitor continuous improvement systems and processes
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	

Job role context	Operates under general guidance on progress and outcomes of work.
	
	Exercises some discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes.
	
	May have responsibility for others individually or in teams.
	
	Sources of information/documents may include:
	$ organisational goals, objectives and business plans
	$ quality and continuous improvement processes.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ manage work to achieve required outcomes
	$ explain to others the organisation continuous improvement processes

	$ prepare and negotiate recommendation to improve products and work processes
	$ use appropriate consultative processes to effect change
	$ locate, interpret and apply relevant information
	$ maintain workplace records and appropriate statistical data
	$ lead colleagues in implementation of continuous improvement processes

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ methods and approaches to monitor and introduce improved performance
	$ provide feedback to others
	$ use technology appropriate for the task(s)
	$ production workflow in relation to deadlines, process requirements and customer needs
	$ focus of operation of work systems and equipment
	$ identification and correct use of information systems, technology equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to workplace systems and procedures
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Monitors outcomes of work and introduces ways to improve performance Encourages contributions from others on potential improvements to work systems Commitment of team members is to continuous improvement is measureable Action taken promptly to complete reports within workplace procedures
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	2	3	2

UNIT	Facilitate and capitalise on change and innovation PMB MANAGE05 A
FIELD	Frontline management
DESCRIPTION	This unit applies to those required to foster change and act as a catalyst in the implementation of change and innovation ensuring that individuals, the team and the organisation gain from change; and that the customer benefits through improved products and services.

Element	Performance criteria
Participate in planning the introduction of change	$ The manager contributes effectively in the organisation=s planning processes to introduce change $ Plans to introduce change are made in consultation with designated individuals/groups $ The organisation=s objectives and plans to introduce change are explained clearly to individuals/teams
Develop creative and flexible approaches and solutions	$ Alternative approaches to managing workplace issues and problems are identified and analysed $ Risks are assessed and action is taken to achieve a recognised benefit or advantage to the organisation $ The workplace is managed in a way which promotes the development of innovative approaches and outcomes $ Creative and responsive approaches to resource management improves productivity and/or reduces costs in a competitive environment
Manage emerging challenges and opportunities	$ Individuals/teams respond effectively and efficiently to changes in the organisation=s goals, plans and priorities $ Coaching and mentoring assists individuals/teams develop competencies to handle change efficiently and effectively $ The manager uses opportunities within area of responsibility and authority to make adjustments to respond to the changing needs of customers and the organisation $ Individuals/teams are kept informed of progress in the implementation of change $ Recommendations for improving the methods/techniques to manage change are negotiated with designated persons/groups

UNIT	Facilitate and capitalise on change and innovation
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	

Job role context	Operates under general guidance on progress and outcomes of work
	
	Exercises creativity, discretion and judgement for self and others in planning and using resources, services and processes to achieve required outcomes
	
	May have responsibility for others individually or in teamsSources of information/documents may include:
	$ organisational policies & business plans
	$ workplace operating procedures and policies
	$ supplier and/or client instructions

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ manage work effectively to achieve goals and results
	$ explain context and extent of organisational change
	$ monitor trends in the external environment to develop and maintain a competitive edge
	$ locate, interpret and apply relevant information to the workplace context
	$ maintain workplace records and information systems

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ identify opportunities to introduce change
	$ use workplace diversity to introduce and benefit from change
	$ use consultation processes - formal and informal - to promote change and innovation
	$ focus of operation of work systems and equipment
	$ identification and correct use of information systems, technology, equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to information on changing contexts and a position that enables contribution to change
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Seek feedback from others and act on suggestions for improvement Promotes opportunities for learning by self and others
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	3	3	3

UNIT	Prepare for training (category 1) PMB TRAIN01 A
FIELD	Training
DESCRIPTION	This unit applies to employees who are required to plan for the training of individuals or small groups when structured training is not a major part of the employees= job role.

Element	Performance criteria
Confirm the need for training	$ The specific training need is identified or advised by appropriate personnel $ The specific training need is confirmed with appropriate personnel $ The training objectives reflect the specific training need
Plan and document training session	$ Training outcomes are clearly stated $ Steps in the training session follow a logical sequence - the training outcomes - employee characteristics - availability of equipment and resources $ Plans for skills practice by employees are made $ Tools, equipment and other resources required are identified $ Provision for monitoring employees progress is made $ Evidence required for assessment and how it will be collected is stated
Arrange location and resources	$ Resources required for training are identified and approved by appropriate personnel $ Suitable locations for the training are arranged $ The equipment, tools and other resources required are available when needed $ Arrangements are made with any people who are required to help in the training session or in the follow-up to the training session $ The training environment is arranged to simulate work tasks
Notify employees	$ Employees are notified of the purpose, likely outcomes, time and place of the training session $ Employees= supervisor(s) are notified of the time and place of the training and of any other requirements for the training session

UNIT	Prepare For training (category 1)

Range of variables	
This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Training may be for single employees or small groups. $ Training delivery may be on the job or in a simulated setting. $ Training may be involved with work conducted in any shift, in restricted spaces, exposed

	conditions, controlled or open environment and may involve exposure to chemicals and other harmful substances, movement of equipment, goods, vehicles. $ Sources of information/documents may include: - process manufacturing competency standards and related explanatory texts - standard operating procedures - workplace policies and procedures for training
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ support learning of self and others
	$ work effectively with others
	$ convey information in written and oral form
	$ explain requirements for the training and provide individualised help to promote learning
	$ explain to others the need for training, the outline of the training session and intended outcomes for of the training
	$ select training method and location
	$ recognise individual differences in employees undertaking training adjust training strategy to suit
	$ plan (in writing) training session
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ competency in the units being taught
	$ familiarity with the workplace application of the related units of competency for this training and any prerequisite units$ communication skills appropriate for the explanation and oral questioning of employees undertaking training
	$ application of relevant industrial requirements
	$ focus of operation of work systems and equipment
	$ application of relevant agreements, codes of practice or other legislative requirements
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to appropriate units of competency, facilities and potential target audience
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Plans for training reflect competency, individual and workplace needs and are reviewed to identify improvements

	Organisation of training site and any equipment requirements is timely and effective Feedback is provided to employee undertaking training and relevant supervisory personnel Recognises and appropriately deals with cultural differences in the workplace, including modes of behaviour and interactions among staff and others Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	2	2	2	2

UNIT	Deliver training (category 1) PMB TRAIN02 A
FIELD	Training
DESCRIPTION	This unit applies to employees who deliver training on an individual basis or to small groups when structured training is not a major part of the employees= job role.

Element	Performance criteria
Prepare employees	$ The objectives of the training session are explained and discussed with the employees $ The sequence of activities to be followed in the training session is explained to employees $ Employees are made aware of the work application of the skill or job being taught $ Any barriers to the performance of the required competencies being taught are identified and discussed with employees $ The assessment process, reasons and desired outcomes are explained to employees
Instruct employees	$ A systematic approach is taken to instruction, taking into account: - explanation - demonstration - review - employee responses - employee demonstration - feedback $ Instruction process is revised and modified as necessary to meet the employee=s learning needs $ Employees are encouraged by positive comments from the trainer $ Feedback during instruction is designed to help employees learn from their mistakes $ Employees are encouraged and guided to evaluated their own performance and diagnose it for improvement
Provide opportunities for practice	$ Practice opportunities are provided according to the specific learning situation and the training objectives $ Constructive feedback and reinforcement are provided during practice $ Employees= readiness for assessment is monitored
Confirm employee has reached required standard of performance	$ Evidence of satisfactory performance by the employee is collected in accordance with the training session plan $ The employee is advised when they have reached the required standard of performance $ Other appropriate personnel are advised that the employee has reached the required standard of performance

UNIT	Deliver training (category 1)
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Training may be for single employees or small groups $ Training delivery may be on the job or in a simulated setting $ Training may be involved with work conducted in any shift, in restricted spaces, exposed conditions, controlled or open environment and may involve exposure to chemicals and other harmful substances, movement of equipment, goods, vehicles $ Sources of information/documents may include: - process manufacturing competency standards and related explanatory texts - standard operating procedures - workplace policies and procedures for training.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ support learning of self and others
	$ locate, interpret and apply relevant information
	$ work effectively with others
	$ convey information in written and oral form
	$ maintain workplace records
	$ follow the written plan to conduct the training making appropriate adjustments for context and participants
	$ provide practical demonstrations as part of the explanation process
	$ reinforce consistent application by participants of desirable attributes
	$ encourage practice and feedback from participants
	$ assist participants to access required information and use it to inform learning.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. or function, particularly *Prepare for Training.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ competency in the units being taught
	$ familiarity with the workplace application of the related units of competency for this training and any prerequisite units
	$ communication skills appropriate for the explanation and oral questioning of employees undertaking training
	$ application of relevant industrial requirements
	$ range of delivery strategies
	$ questioning techniques
	$ contingency management
	$ coaching and mentoring approaches

Resource implications	Access to plans for training, appropriate facilities and employees wishing to take part in training
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment

	Plans for training reflect competency, individual and workplace needs and are reviewed to identify improvements Organisation of training site and any equipment requirements is timely and effective Feedback is provided to employee undertaking training and relevant supervisory personnel Recognises and appropriately deals with cultural differences in the workplace, including modes of behaviour and interactions among staff and others Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	2

UNIT	Review training (category 1) PMB TRAIN03 A
FIELD	Training
DESCRIPTION	This unit applies to employees for whom training is not a major component of job role who are required to review, record and evaluated own training effort and to support colleagues in developing strategies to meet learning needs.

Element	Performance criteria
Evaluate training session	$ Employees are asked to assess personal ability to apply the required competencies as a result of the training session(s) and discuss possible improvements $ Employees= reaction to the training session is sought $ Own performance is reviewed against session objectives and in response to employees= comments $ Review comments are summarised $ The results of the evaluation are used to guide future training effort
Record training	$ The details of the employees who have completed the training are accurately recorded according to the organisation=s requirements $ Other records as required by legislation or agreement are kept $ Records are released to authorised personnel only $ Records are securely stored
Provide information on training	$ Information on training proposed, in hand or completed is readily available to management $ Information on appropriate, available training is provided to employees on request

UNIT	Review training (category 1)
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Training may be for single employees or small groups $ Training delivery may be on the job or in a simulated setting $ Training may be involved with work conducted in any shift, in restricted spaces, exposed conditions, controlled or open environment and may involve exposure to chemicals and other harmful substances, movement of equipment, goods, vehicles $ Sources of information/documents may include: - process manufacturing competency standards and related explanatory texts - standard operating procedures - workplace policies and procedures for training.
Evidence guide	
Critical aspects of evidence to be	Assessment must confirm appropriate knowledge and skills to: $ support learning of self and others

considered	$ locate, interpret and apply relevant information
	$ work effectively with others
	$ convey information in written and oral form
	$ actively encourage participants to offer suggestions for improvements to training
	$ complete accurate records of training conducted, participant achievement in relation to demonstration of required competencies

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role. or function, particularly *Deliver Training.*

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ familiarity with the workplace application of the units of competency relating to this training and any prerequisite units
	$ communication skills appropriate for gathering evidence regarding the usefulness of training
	$ application of enterprise and provider policies, equal opportunity and equal employer opportunity legislation and processes
	$ maintenance of confidentiality of records
	$ ethical handling of performance issues
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to records system for training, information, and participants from training sessions, relevant trainers and supervisory staff (where appropriate)

Consistency in performance may include	Establishes effective working relationships with colleagues
	
	Modifies activities to cater for variations in workplace contexts and environment
	
	Identifies review strategies
	
	Conducts discussions with training participants
	
	Records outcomes of trainingMakes recommendations for improvement
	
	Shows evidence of application of relevant workplace procedures including:
	$ hazard policies and procedures
	$ issue resolution procedures
	$ job procedures and work instructions
	
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	2	2	2	2	3	3

UNIT	Prepare for training (category 2) PMB TRAIN04 A
FIELD	Training
DESCRIPTION	This unit applies to employees who prepare to deliver training and have responsibility for facilitating the training of groups to achieve pre-determined outcomes.

Element	Performance criteria
Confirm the needs for training	$ Information on training needs is collected using appropriate investigation methods $ Appropriate methods of analysis are used to interpret the information $ Conclusions about the need for training are verified with appropriate personnel
Define training requirements	$ Competencies that relate to specific jobs, roles or functions are identified $ Applicable endorsed competency standards are obtained and used $ Competencies held by individuals are correctly compared with competencies required for the job, role or function $ Training outcomes are identified in consultation with relevant parties $ Barriers to learning are identified
Develop training programs	$ The outcomes of training will meet the performance and underpinning knowledge requirements for the relevant unit(s) $ Sequence and timing of the learning activities are recorded $ Strategies are adopted to make training accessible and effective for all employees $ Strategies to overcome barriers to learning are developed $ Training methods are identified which are appropriate for: - the training outcomes - employee characteristics - availability of equipment and resources $ Training is designed and developed so that, at appropriate stages, learning will be confirmed and feedback provided to employees $ Opportunity is provided for employees to relate learning to their work situation $ Employees are given the opportunity to manage their own learning $ Learning materials are identified $ Evidence required for assessment and how it will be collected is stated $ Training costs are identified and confirmed with appropriate personnel
Prepare learning materials	$ Outcomes of the training including relevant unit,or units, of competency are listed $ Design decisions are taken to overcome barriers to learning $ Subject matter required to achieve the competencies is specified $ Formats for the material are selected which enhance the learning capability of employees $ Text appropriate in terms of language, style and level, is used $ Clear, accurate visual materials conforming to display conventions are used $ Instructions for use of required equipment are provided $ Copyright laws are observed
Manage training events	$ Resources required for training are identified, and approved by appropriate personnel $ A training location is identified and arranged to support the learning opportunities specified $ The required equipment, tools and other resources are identified and arranged to support the learning opportunities specified $ Arrangements are made with any people who are required to help in the training program $ The training environment arranged is safe and accessible
Establish training data bank	$ A list of internal training resource people is maintained $ External people from whom information on training can be obtained are identified and recorded

	$ Training materials and information on training and assessment are held in an accessible form $ An up to date register of likely external courses and providers is maintained

UNIT	Prepare for training (category 2)
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Training may be conducted by subordinates, peers, supervisors or external contractors or Registered Training Organisations to facilitate group learning. $ Training delivery may be on the job or in a simulated setting, utilising a range of methods, locations and contexts. $ Training may be involved with work conducted in any shift, in restricted spaces, exposed conditions, controlled or open environment and may involve exposure to chemicals and other harmful substances, movement of equipment, goods, vehicles. $ Training delivery may be on or off the job, utilising a range of methods, locations and contexts. $ Training may involve single site or multi site operations. $ Outcomes of training and assessment impact on organisational effectiveness. $ Sources of information/documents may include: - process manufacturing competency standards and related explanatory texts - workplace policies and procedures for training.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ analyse training needs of individuals and particular target groups
	$ match training needs to endorsed units of competency
	$ devise training system to implement required competencies within the workplace context
	$ identify support mechanisms for employees requiring language or other particular training support
	$ plan for use of a range of delivery methods and approaches to allow for trainer/participant choice to meet needs of particular training contexts and special needs
	$ select suitable learning resources and customise them for the delivery setting
	$ design and produce resources to meet identified gaps
	$ access appropriate training venues and areas and arrange appropriately for the required training outcomes
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ applications of process manufacturing competency standards and Australian Qualifications Framework (AQF) in the enterprise
	$ relationships of units of competency and enterprise industrial agreements and skill based classification systems
	$ applications of the relevant workplace policies and procedures that apply to that work and (any) related legislation on regulatory requirements

	$ design and copyright considerations for learning resources
	$ sources of assistance for participants requiring language or other particular training support
	$ adapt learning resources including modules and learner guides to suit target audience and delivery context
	$ requirements for compliance with copyright law for resources used in training
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to target audience, potential opportunities to identify training needs in an organisational context, relevant standards and resources
Consistency in performance may include	$ Establishes effective working relationships with colleagues $ Modifies activities to cater for variations in workplace contexts and environment $ Identifies training needs for individuals and organisations $ Plans for training sessions $ Prepares resources $ Organises training events $ Ensures observance of occupational health & safety and security standards $ Follows company procedures for planning of training, accessing participants and resources, venues and equipment for training purposes $ Maintains records of training resources $ Planned training meets company/participant training needs $ Shows evidence of application of relevant workplace procedures including: - work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	2	3	3

UNIT	Deliver training (category 2) PMB TRAIN05 A
FIELD	Training
DESCRIPTION	This unit applies to employees who deliver training and have responsibility for facilitating the training of groups to achieve predetermined outcomes.

Element	Performance criteria
Prepare employees for the learning experience	$ Objectives of the training session(s) and the units of competency to be achieved are explained to, and discussed with, employees $ Any barriers to learning are explored with employees $ The sequence of activities to be followed in the training program is explained to employees $ Ways in which the competencies are to be developed and assessed are explained to, and discussed with, employees
Present training session	$ Presentation and training methods are structured and appropriate for the development of the competencies by the employees $ Presentation and training methods provide variety, encourage participation and reinforce key points $ Presentation process is reviewed and modified as necessary to meet employees= learning needs $ Training equipment and materials are used in a way that enhances learning $ Information is clear and accurate and presented in correct sequence $ Employees are encouraged to participate by asking questions, clarifying points of concern and contributing comments at appropriate and identified stages $ Supplementary information is provided to enhance and clarify understanding as required $ Summaries of key points are used at appropriate times in the presentation session to reinforce learning
Support employees in managing own learning	$ Resource materials suitable for self-managed learning are provided $ The requirements for the effective participation in the learning process is explained $ Health and safety hazards are pointed out to employees $ Timely information and advice is given to employees during the learning process $ Participant learning progress is monitored and assistance is provided to those who require help $ Opportunities to make choices and decisions are provided
Facilitate group learning	$ The rationale, process and outcomes expected from the group training session(s) are explained to employees $ Group training methods are used to maximise learning effectiveness $ Individuals are assigned to groups in which they can work effectively $ Groups are provided with clear directions, and guidance on content and process as required $ Groups are assisted to recognise the needs and requirements of individual members $ Interventions by the trainer in group discussions are properly managed $ Review of effectiveness of group activities and learning approaches is shared between the participants and the trainer
Provide opportunities for practice	$ Practice opportunities are provided according to the specific learning situation and the training program $ Employees= readiness for assessment as having achieved competency is monitored and discussed with employees $ Process, rationale and outcomes of practice are discussed with employees $ Constructive feedback and reinforcement are provided during practice

Provide feedback on progress to employees	$ Employees= progress is evaluated against learning outcomes, organisation and employee goals $ Feedback is given to employees on the outcomes of progress review $ Employees are helped to consider and evaluate individual and group progress $ Progress results are diagnosed to provide a guide for the approach to next steps in training
Review delivery experience	$ Employees= reaction to the delivery is sought and discussed at appropriate times $ Trainer=s performance is self-assessed against predetermined goals $ Adjustments to delivery practices are considered and incorporated

UNIT	Deliver training (category 2)
Range of variables	
This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ Training may be conducted by subordinates, peers, supervisors or external contractors or Registered Training Organisations to facilitate group learning. $ Training delivery may be on the job or in a simulated setting, utilising a range of methods, locations and contexts. $ Training may be involved with work conducted in any shift, in restricted spaces, exposed conditions, controlled or open environment and may involve exposure to chemicals and other harmful substances, movement of equipment, goods, vehicles. $ Training delivery may be on or off the job, utilising a range of methods, locations and contexts. $ Training may involve single site or multi site operations. $ Outcomes of training and assessment impact on organisational effectiveness. $ Sources of information/documents may include: - process manufacturing competency standards and related explanatory texts - workplace policies and procedures for training.
Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ use the training program and the relevant units of competency to deliver training customised to the group and delivery context
	$ identify improvements to training delivery
	$ question individuals to provide for practice and reinforcement of learning
	$ provide instruction and information
	$ access support mechanisms for employees requiring language or other training support
	$ select and use a range of delivery methods to suit participants, context and competencies to be achieved
	$ operate within a variety of training contexts and with varied groups of participants
	$ provide support to individual learners within a group learning context.
	$ use appropriate workplace language and communication technologies
	$ locate, interpret and apply relevant information.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ applications of process manufacturing competency standards and Australian Qualifications Framework (AQF) in the enterprise
	$ relationships of units of competency and enterprise industrial agreements and skill based classification systems
	$ applications of the relevant workplace policies and procedures that apply to that work and (any) related legislation on regulatory requirements
	$ principles of adult learning and required knowledge for the unit(s) of competency
	$ alternate delivery strategies and approaches
	$ range of resource materials available
	$ focus of operation of work systems, equipment or management, site and organisational operating procedures

Resource implications	Access to training situations and groups requiring training
Consistency in performance may include	Establishes effective working relationships with colleagues Modifies activities to cater for variations in workplace contexts and environment Recognises and adapts appropriately to cultural differences in the workplace including modes of behaviour and interaction among staff and others Follows company policy for training and record keeping. Responds to feedback and modifies delivery to improve performance Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	2	3	3	2	2

UNIT	Contribute to the development of a workplace learning environment PMB TRAIN06 A
FIELD	Training
DESCRIPTION	Frontline management plays a prominent role in encouraging and supporting the development of a learning organisation. Promoting a learning environment in which work and learning are integrated is an important goal to be achieved.

Element	Performance criteria
Create learning opportunities	$ Workplace environments which facilitate learning are developed and supported $ Learning plans are developed as an integral part of individual/team performance plans $ Learning plans reflect the diversity of needs and learning opportunities $ Individual/team access to, and participation in, learning opportunities is facilitated $ Negotiation with training and development specialists results in the planning and provision of learning which enhances individual, team, and organisational performance
Facilitate and promote learning	$ Workplace activities are used as opportunities for learning $ Coaching and mentoring contributes effectively to development of workplace knowledge, skills and attitudes $ The benefits of learning are shared with others in the team/organisation $ Workplace achievement is recognised by timely and appropriate recognition, feedback and rewards
Monitor and improve learning effectiveness	$ Performance of individuals/teams is monitored to determine the type and extent of additional work-based support $ Feedback from individuals/teams is used to identify and introduce improvements in future learning arrangements $ Adjustments negotiated with training and development specialists results in improvements to the efficiency and effectiveness of learning $ Records and reports of competency are documented and maintained within the organisation=s systems and procedures
Record training data	$ Details of training program and participants are recorded in accordance with organisations/industry and/or legislative requirements $ An appropriate means of storing information on employees, training programs, and equipment, materials and resources is established and maintained $ Existing recording systems are reviewed and improvements suggested $ Training records are made available to authorised persons and employees at the required times according to organisational requirements $ Records are accurately stored
Promote training	$ Reports on training are prepared and provided according to organisational requirements $ Reports are made on future training initiatives $ Information on achievements of the organisation=s training is analysed and publicised $ The contribution of training to organisational goals is reported

UNIT	Contribute to the development of a workplace learning environment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see	

pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.

Job role context	Training may be conducted by subordinates, peers, supervisors or external contractors or Registered Training Organisations. Training delivery may be on the job or in a simulated setting, utilising a range of methods, locations and contexts. Training may involve single site or multi site operations. Training may be involved with Work conducted during any shift, in restricted spaces, exposed conditions, controlled or open environment and may involve exposure to chemicals, and other harmful substances, movements of equipment, goods, vehicles. Outcomes of training and assessment impact on organisational effectiveness.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ negotiate with assessors/trainees and Registered Training Organisations to meet specialist training and assessment needs
	$ identify organisational training needs and promote training appropriate for those needs
	$ describe the positive outcomes for organisations and individuals arising from training and assessment
	$ manage and make available to relevant personnel, information on training reforms and relating to the Industry
	$ develop and use systems to obtain qualitative and quantitative data to improve organisational performance in relation to training outcomes
	$ provide reports to relevant organisations on training needs and outcomes
	$ locate, interpret and apply relevant information
	$ maintain workplace records.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ the means to link competency development with normal work activities of team members/individuals
	$ applications of process manufacturing competency standards and Australian Qualifications Framework (AQF) in the enterprise
	$ relationships of units of competency and enterprise industrial agreements and skill based classification systems
	$ applications of relevant company policies and procedures that apply to that work and (any) related legislation or regulatory requirements

	$ design and copyright considerations for learning resources
	$ evidence gathering for evaluation purposes
	$ adaptation and use of training record systems for formative as well as final assessments
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	$ Access to training record systems, programs, participants, and trainers $ Opportunities to discuss training outcomes with participants= supervisors

Consistency in performance may include	$ Prepares reports and recommends improvements to training $ Encourages colleagues to mentor and coach others and to share knowledge and skills $ Contributes effectively to the development of workplace training policy $ Responds promptly to requests to identify training needs and proposes appropriate solutions $ Maintains record systems, confidentiality maintained within company policy $ Establishes effective working relationships with colleagues $ Modifies activities to cater for variations in workplace contexts and environment $ Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production $ Recognises and adapts appropriately to cultural differences in the workplace including modes of behaviour and interaction among staff and others
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
3	3	3	3	2	3	3

UNIT	Conduct assessment in accordance with established assessment proceduresPMB ASSE
FIELD	Assessment
DESCRIPTION	This unit of competency, in combination with the unit *Plan and review assessment*, meets the requirements for the Ministerial Agreement on minimum requirements for the conduct of assessment under the National Training Framework.

Element	Performance criteria
Identify and explain the context of assessment	$ Discuss the context and purpose of assessment with the person(s) being assessed and confirm that it is understood $ Obtain and explain to the person(s) being assessed the relevant performance measures applying to assessment (eg. current endorsed competency standards, learning outcomes of the training program). Instructions are verified by person(s) being assessed $ Explain and obtain agreement for the assessment procedure $ Identify and explain any legal and ethical responsibilities associated with assessment to the person(s) being assessed $ Check whether the person(s) being assessed requires the allowable adjustments in the assessment procedure applying to those with special needs
Plan evidence gathering opportunities	$ Identify opportunities to gather evidence of competency which occur as part of workplace or training activities $ Identify the need to gather additional evidence which may not occur as part of workplace or training activities $ Plan and schedule all evidence gathering activity in accordance with the assessment procedure $ Ensure that the planned approach to gathering evidence will provide sufficient, reliable, valid and fair evidence of competency $ Ensure that the planned approach to gathering evidence will cover the four dimensions of competence - task skills - task management skills - contingency management skills - job/role environment skills
Organise assessment	$ Obtain and arrange the resources specified in the assessment procedure $ Inform the relevant people of assessment plans $ Check that the assessment environment permits fair, valid and reliable assessment $ Check that the assessment environment is safe and accessible $ Explain the assessment arrangements and requirements simple and clearly to the person(s) being assessed $ Obtain agreement regarding assessment arrangements with person(s) being assessed
Gather evidence	$ Put the person(s) being assessed at ease $ Gather all the evidence specified in the assessment procedure, using assessment methods and tools specified $ Gather evidence for those with special needs, in accordance with specified allowable adjustments to the assessment method(s) $ Document the evidence gathered in accordance with the assessment procedure
Make the assessment decision	$ Evaluate the evidence gathered in terms of its: - validity - authenticity - sufficiency - currency

	- consistent achievement of the specified standard $ Make the assessment decision in accordance with the criteria specified in the assessment procedure $ Seek guidance, if in doubt, from a more experienced assessor(s) nominated in the assessment procedure
Record assessment results	$ Record assessment results promptly and in accordance with the specified assessment procedure $ Record assessment results accurately in accordance with the specified record keeping requirements $ Provide access to the assessment records only to authorised personnel $ Maintain confidentiality of assessment outcome

UNIT	Conduct assessment in accordance with established assessment procedures
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	

Job role context	Within the context of the endorsed assessment framework for the industry, the assessment completed by assessors will be through a Registered Training Organisations and may include enterprise partners.
	
	The assessment guidelines specify:
	$ the purpose and process of assessment
	$ competencies and certification requirements of assessors
	$ record keeping procedures and policies
	$ any allowable adjustments to the assessment method(s) which are to be made for the person(s) being assessed who have special needs appeal/review mechanisms and procedures, the review and evaluation process
	$ quality assurance procedures
	$ apportionment of costs/fees (if applicable)
	$ marketing/promotion of assessment.
	Consultative processes may involve:
	$ training committees, other employees and supervisors
	$ assessment participants
	$ management
	$ union representatives
	$ industrial relations, occupational health and safety specialists
	$ other professional or technical staff.
	
	Sources of information/documents include:
	$ process manufacturing competency standards, assessment guidelines, training and assessment resources.

Assessment guidelines	This unit forms part of the assessment guidelines developed (and endorsed) by the process manufacturing industry grouping which are consistent with the Ministerial agreement on training package assessment which is summarised below.

Purpose of assessment	Assessment may be used for one or more purposes such as:
	$ diagnosing performance
	$ performance evaluation against a benchmark
	$ awarding a qualification

	$ providing a statement of attainment (where all units of competency for the qualification are not met)
	$ confirming progress in learning
	$ recognising prior learning and
	$ current competency.

Assessor arrangements	Assessment may be conducted by a individuals or partnership arrangements where the following requirements are met:
	$ an assessor holding this unit and the Unit *Plan and Review assessment* working alone
	$ a team comprising subject knowledge expert(s) and assessment expert(s)
	$ an assessor working in conjunction with the trainer, supervisor mentor of the person(s) being assessed or with a more experienced assessor.
	
	Specified needs of competence:
	$ competence in the units of competency being assessed
	$ knowledge of the nature and impact of training reform within the process manufacturing industry, including an overview of the assessment process

Assessment methods and tools	Assessment methods appropriate for the holistic assessment of a unit (or units) of competency and may include a combination of:
	$ direct observation of performance, products practical tasks, projects and simulation exercises
	$ review of log books and portfolios
	$ questioning
	$ consideration of third party reports and authenticated prior achievements.
	
	To assist in collating evidence the following may be provided to assessors:$ Performance guides for practical tasks, log books and portfolios, simulation exercises and projects to enable checking of required characteristics
	$ sets of questions to be asked
	
	These methods may be used in combination in order to provide sufficient evidence to make a judgement.

Assessment location and timing	Assessments may occur in the workplace and/or in an industry-approved facility using on and off the job situations as appropriate to the unit(s) of competency assessed. Assessment may occur over time and include both formative and summative components.
Assessment group size	Assessment may involve assessing one person or a group of people.
Special needs of being person(s) being assessed	Person(s) being assessed may have special needs, and therefore reasonable adjustments may need to be made in the assessment process. Candidates with special needs may include those with disabilities or with literacy, numeracy or language difficulties, those who come from non-English speaking backgrounds, or anxious or inexperienced candidates. Special considerations for employees' needs are to be established and agreed within company policies. Examples of reasonable adjustments include provision of personal support services (eg, Auslan interpreter, reader, interpreter, attendant carer, scribe), use of special equipment (eg. word processor or lifting gear) or adaptive technology, shorter assessment sessions to allow for fatigue or medication, use of large print version of any papers.

Assessment reporting	Final assessments will record the unit(s) of competency in terms of code, title and endorsement date. Summative assessment reports, where issued, will indicate areas of units of competency where additional learning is required. *NB: Statutory and legislative requirements for maintaining records may vary in States/Territories.*

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ follow the approved assessment system
	$ apply the assessment principles of validity, authenticity, sufficiency, currency, cost effectiveness and consistency as they apply to evidence gathering for assessment
	$ interpret and apply legal and ethical responsibilities associated into assessment including licensing requirements, equal opportunity and equal employment opportunity, disability discrimination and occupational health and safety legislation, codes of practice and standards
	$ conduct assessments within the context of process manufacturing industry assessment agreements and policies
	$ application of communication and interpersonal skills to minimise conflicts and promote a supportive assessment environment
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ applications of process manufacturing competency standards and Australian Qualifications Framework (AQF) in the enterprise
	$ relationships of units of competency and enterprise industrial agreements and skill based classification systems
	$ competency in the units of competency being assessed, where assessing alone (note that when assessing in conjunction with persons competent in the area, knowledge of the workplace application of the units of competency is required)
	$ Applications of the relevant company policies and procedures that apply to that work and (any) related legislation on regulatory requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	$ Access to relevant units of competency, industry endorsed assessment guidelines and registered training organisation assessment policies and systems $ Access to person(s) wishing to be assessed and relevant workplace equipment, information and expertise. Evidence of satisfactory performance should be obtained by observation of the Aassessor@ preparing for and conducting assessment as well as examination of completed assessment records. This should be supplemented by discussion about the assessment procedure with the Aassessor@ and the person(s) being assessed

Consistency in performance may include	Establishes effective working relationships with colleagues
	
	Modifies activities to cater for variations in workplace contexts and environment
	
	Shows evidence of application of relevant workplace procedures including:
	$ identifying evidence context, purpose, methods and outcomes to participant
	$ establishing and organising opportunities for assessment
	$ using assessment methods and tools
	$ making judgements concerning appropriate performance
	
	Shows evidence of requiring consistent application by candidates of the application of workplace policies and procedures

	Recognises and uses mechanisms to deal appropriately with cultural differences and assessments for participants with special needs Contributes to reviews of assessment procedures and systems; evaluation and validation processes; competency standards; assessment tools. Creates and takes opportunities to remain current in terms of assessment practices, content and workplace application of transport and distribution and related units of competency Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production
Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise information	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas & techniques	Solve problems	Use technology
2	2	2	2	2	2	3

UNIT	Extension unit - plan and review assessment PMB ASSESS02 A
FIELD	Assessment
DESCRIPTION	This unit of competency in combination with the unit *Conduct assessment in accordance with an established assessment system* meets the requirements for the Ministerial Agreement on minimum requirements for the conduct of assessments under the National Training Framework. Assessors are required to exercise responsibility and judgement in establishing evidence gathering requirements and methods, reviewing and refining the assessment process.

Element	Performance criteria
Establish evidence required	$ Establish the evidence required to infer competency from the endorsed competency standards $ Specify evidence requirements to assure valid inferences of competency $ Specify evidence requirements for the assessor to authenticate the performance/product of the person(s) being assessed $ Specify sufficient evidence on which to base valid inferences $ Specify evidence requirements which will confirm that competency is current $ Specify sufficient evidence to show consistent achievement of the specified standards $ Identify opportunities to consolidate evidence gathering activity $ Establish the cost of gathering the required evidence
Establish suitable assessment method(s)	$ Select assessment methods which are appropriate for gathering the type, and amount of, evidence required $ Propose suitable adjustments in the assessment method to cater for those person(s) being assessed who have special needs
Develop simple assessment tools	$ Design assessment tool(s) to gather valid, reliable, sufficient evidence or to complement the use of other assessment tools in gathering evidence $ Design an assessment tool which is clear and comprehensible both to those conducting the assessment and to those being assessed $ Verify that the assessment tool permits flexible, fair and safe assessment to occur $ Verify that the assessment tool is cost-effective in gathering required evidence $ Prepare accompanying instructions for use specifying any adjustments which can be made to address the requirements of people being assessed who have special needs
Review evidence requirements, assessment methods and assessment tools	$ Trial assessment methods and assessment tools with people similar to those who will ultimately be assessed $ Evaluate the assessment methods and tools for: - clarity - reliability - validity - fairness - cost effectiveness $ Make improvements and changes to the assessment method and assessment tools in the light of the evaluation of the pilot exercise $ Ratify procedures with relevant people in the industry/enterprise or training establishment of the evidence requirements, assessment methods and assessment tools and the process used in developing them
Periodically review the assessment procedures	$ Comply with the review process established by the enterprise, industry or training authority $ Review the operations of the assessment procedure at a specified site in cooperation with person(s) being assessed, and any relevant parties (industry/enterprise/registered provider training establishment and/or any agency indentified under legislation) $ Document and evaluate review activities and substantiate review findings $ Make recommendations for changes to the assessment procedure in the light of the

	review outcomes to the appropriate person(s) $ Make effective contributions to system-wide reviews of the assessment process

UNIT	Extension unit - plan and review assessment
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	
Job role context	$ This range of variables should be read in conjunction with the variables for *Conduct assessment in accordance with an established assessment procedure*. $ Outcomes of assessment impact on organisational effectiveness. $ The review/evaluation of the assessment process may allow for: - continuous monitoring and improvement - periodic formal evaluation - a combination of continuous monitoring and formal evaluation. $ The planning and reviewing responsibilities of the assessor may be specified by the registered training organisation. They may include responsibility for such matters as: - reviewing the assessment procedure at a specific site (enterprise or training establishment) and then making recommendations for improvement - reviewing the assessment procedure conducted across sites (enterprises or training establishments) and then making improvements - reporting challenges to assessment decisions to the appropriate person(s)- reporting to the appropriate person(s) any difficulties or unusual occurrences in conducting the assessment and then making recommendations for improvement. $ Planning and review activities should take into account the following aspects: - number of persons being assessed - duration of assessment procedure - organisational constraints within which assessors must operate - occupational health and safety factors - relationship of the assessor to other people in the assessment process - frequency of assessment procedure - budgetary restraints - information needs of relevant organisations such as affirmative action agencies - effective operation of each component of the assessment system or procedure - support needs and further training needs of assessors - the validity of specified evidence requirements assessment methods and instruments - special needs consideration of person(s) being assessed - industrial relations implications - consistency of assessment practices and decisions - levels of flexibility in the assessment procedure used - fairness of the assessment procedure used - efficiency and effectiveness of the assessment procedure. $ Consultative processes may involve: - training committees, other employees and supervisors - Registered Training Organisation personnel - assessment participants. $ Sources of information/documents may include: - process manufacturing units of competency, assessment guidelines, learning resources and training package information.
Evidence guide This evidence guide should be read in conjunction with the unit *Conduct assessment in accordance with an established assessment system*.	
Critical aspects of evidence to be	Assessment must confirm appropriate knowledge and skills to: $ assist in the design of registered provider assessment review systems

considered	$ interpret and provide advice on the requirements of the process manufacturing assessment guidelines in relation to review, evaluation and validation of assessment to endorsed industry standards
	$ provide useful recommendations on improvements (written and oral) to the assessment process (personal practice and provider policy)
	$ make appropriate reports to persons with responsibility for the system
	$ report system improvements and non-conformities
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ apply basic evaluation methodologies to reviewing the implementation efficiency and effectiveness of the assessment process
	$ support other assessors in the review of the registered provider assessment policy
	$ obtain from participants, and other relevant personnel feedback on the outcomes of assessment for individuals and the enterprise
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to assessments, others assessors and appropriate registered provider assessment system and mechanisms to organise evaluation data

Consistency in performance may include	Establishes effective working relationships with colleagues
	
	Modifies activities to cater for variations in workplace contexts and environment
	
	Application of knowledge and skills to:
	$ analyse units of competency and devise simple methods and tools for evidence gathering
	$ select representative sample(s) for trialing of assessment tools/methods
	$ plan assessment sequences (formative and summative) and provision of feedback to assessees
	$ identify appropriate evidence for evaluation/validation purposes
	$ analyse evidence from own assessments and improving personal performance
	
	Shows evidence of application of relevant procedures including:
	$ use of review, evaluation and validation instruments and processes from industry assessment guidelines; registered provider; State /Territory education and training authorities
	$ participating in review procedures for assessment at the registered provider and state/national provider level
	$ evaluation of own assessment plans and procedures
	
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse & organise	Commu-nicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathemati-cal ideas &	Solve problems	Use technology

information				techniques		
3	2	3	3	3	3	3

UNIT	Develop assessment tools PMB ASSESS03 A
FIELD	Assessment
DESCRIPTION	This unit of competency applies to assessors who are required to evaluate existing assessment tools in relation to enterprise and/or assessment context and modify or develop assessment tools to meet particular purposes.

Element	Performance criteria
Identify appropriate assessment tools	$ Determine the range of available assessment tools appropriate to assessment contexts and characteristics of person(s)) being assessed $ Identify any shortfall or inadequacies in the range of relevant assessment tools available $ Identify and select assessment tools consistent with assessment purposes and procedures $ Determine the nature and range of reasonable adjustment allowed for each assessment tool
Assemble assessment tools	$ Design or modify existing assessment tools so that their format, language, literacy and numeracy requirements are appropriate to the characteristics of the assessors, person being assessed and the assessment context $ Verify that the assessment tools maintain validity but are easy to administer and allow sufficient flexibility to meet the range of possible assessment contexts $ Verify that the assessment tools designed and/or selected are valid and maximise reliability, flexibility and fairness $ Modify existing assessment tools when required to meet the particular assessment needs of assessors, person(s) being assessed and the particular contexts in which assessment is to be conducted
Trial and review assessment tools	$ Identify the criteria used to evaluate the outcomes of trials will be evaluated $ Determine representative groups for trial assessment events $ Conduct trials and seek responses from all involved parties $ Compile and analyse responses from trials $ Modify assessment tool(s)) based on the responses to the trials

UNIT	Develop assessment tools
Range of variables This range of variables is designed to be read and used in conjunction with the COMMON RANGE OF VARIABLES (see pages C1-C2) as part of any assessment activity. The common range of variables should be used to assist in planning assessment and training activities.	

Job role context	This unit should be read in conjunction with the range of variables for *Conduct assessment in accordance with an established assessment system*.
	
	Assessment tools may be used on the job or in a simulated setting.Assessment tools may be required to be used in a single site or multi site operation.
	
	Assessment may occur:
	$ in the workplace - on or off the job
	$ in a training establishment/centre simulated work environment
	$ in a combination of locations to suit the units of competency being assessed.
	
	Outcomes of assessment impact on organisational effectiveness.

	Consultative processes may involve:
	$ other assessors and assessment designers
	$ person(s) being assessed, other employees and supervisors
	$ joint consultative committees, union representatives, management
	$ users of assessment information such as Registered Training Organisations, employers, human resource department
	$ State/Territory Training Authorities.

Characteristics of person(s) being assessed	Significant characteristics which may need to be taken into account during assessment may include:
	$ language, literacy and numeracy levels
	$ cultural background
	$ non-English speaking background
	$ disabilities
	$ shift worker
	$ older employees
	$ gender
	$ experience in assessment
	$ nervousness or anxiety.

Appropriateness of evidence types	Appropriateness of evidence may include:
	$ cost effectiveness
	$ practicability
	$ communication skills of person(s) being assessed
	$ assessment experience and special needs of person(s) being assessed.

Assessment policy	There may be enterprise/registered training organisation policies or agreements(s) on assessment covering all or some of the following:
	$ purposes of assessment
	$ industrial relations issues
	$ what and who is to be assessed
	$ timing of assessments
	$ links with other human resources functions
	$ record keeping requirements
	$ recognition of prior learning/recognition of current competency
	$ development costs and resources
	$ evaluation.

Assessment methods	Assessment methods may include combinations of:
	$ direct observation of performance or product
	$ practical tasks
	$ projects
	$ written/oral/computer-based questioning
	$ simulation exercise(s)
	$ consideration of third party reports and self and peer assessment
	$ authenticated prior achievements.

Evidence gathering tools	Evidence gathering/assessment tools may include:
	$ specific instructions to be given in relation to the performance of practical tasks or processes or simulation exercises
	$ specific instructions to be given in relation to the production of projects and exercises
	$ sets of oral/written/computer-based questions
	$ performance checklists
	$ log books
	$ marking guides.

	A number of these tools may be used in combination in order to provide sufficient evidence for judgements.

Operational constraints	Operational constraints may include:
	$ time available for assessment
	$ relative cost of evidence gathering strategies
	$ availability of assessors
	$ availability of experts in the vocational area to be assessed
	$ availability of person(s) being assessed because of matters such as rosters, shift work
	$ geographical location of person(s) being assessed.

Record systems	Record system may include:
	$ paper based systems
	$ computer-based systems using magnetic or optical storage
	$ combination of both paper and computer based systems.
	
	NB: Statutory and legislative requirements for maintaining records may vary between States/Territories.

Evidence guide	

Critical aspects of evidence to be considered	Assessment must confirm appropriate knowledge and skills to:
	$ select appropriate tools to gather evidence type(s) relevant to the competencies being assessed.
	$ choose the evidence types which are appropriate to the assessment contexts and meet operational constraints
	$ design assessment tools with regard to sufficiency, currency, consistency and authenticity and to take into account the characteristics of person(s) to be assessed
	$ design flexible assessment methods and tools that can be contextualised for different environments, participant needs and special circumstances
	$ select a sample audience and trial assessment tools making appropriate adjustments
	$ design assessment tools which will provide time and cost effective assessments
	$ establish an evaluation criteria for assessment tools
	$ locate, interpret and apply relevant information
	$ maintain workplace records
	$ identify and safely handle products and materials
	$ apply safety precautions appropriate to the task.

Interdependent assessment of units	This unit of competency may be assessed in conjunction with other units that form part of a job role.

Required knowledge and skills may include	Display of the following knowledge and skills in terms of job role or function:
	$ process manufacturing competency standards and assessment guidelines
	$ analysis of units of competency to determine appropriate indicators of competency evidence requirements
	$ application of assessment methods and tools to elicit appropriate evidence, in a workplace context, from target audience
	$ compliance with requirements for copyright and other regulatory requirements
	$ focus of operation of work systems and equipment
	$ identification and correct use of equipment, processes and procedures
	$ planning own work including predicting consequences and identifying improvements

Resource implications	Access to a target audience, unit(s) of competency to be assessed, and resources for the development of assessment methods and tools

Consistency in performance may include	Establishes effective working relationships with colleagues
	
	Modifies activities to cater for variations in workplace contexts and environment
	
	Shows evidence of application of relevant workplace procedures including:
	$ justifying selection of tools and evidence gathered in terms of the units of competency; time and costs; ease of use by participants and assessors
	$ adjusting assessment methods and tools to particular contexts
	$ designing assessment to account for recognition of current competency and for identification of developmental needs
	$ evaluating appropriate assessment tools for the target audience
	
	Work completed systematically in accordance with safe operating procedures to minimise the risk of injury to self or others or damage to goods, equipment or products in production

Context for assessment	Assessment may occur on or off the job.

Key competencies						
Collect, analyse &	Commu-nicate ideas &	Plan & organise	Work with others & in	Use mathemati-cal	Solve problems	Use technology

organise information	information	activities	teams	ideas & techniques		
3	3	3	3	3	3	3