



Australian Government

PMB20107 Certificate II in Polymer Processing

Release 2

PMB20107 Certificate II in Polymer Processing

Modification History

Release 2 - Imported units of competency updated to current versions

Release 1 - Initial release

Description

Job roles/employment outcomes

The Certificate II in Polymer Processing is intended for competent operators who operate production equipment or undertake similar roles directly producing products. The operator would apply a breadth and depth of knowledge to a defined range of situations and would be expected to apply this knowledge to solve a defined range of problems by applying known solutions to a limited range of predictable problems.

For job roles at Certificate I level and for people working in the industry in production support roles, the following Certificates in MSA07 Manufacturing Training Package would be appropriate:

- MSA10207 Certificate I in Process Manufacturing
- MSA20107 Certificate II in Process Manufacturing.

The relevant MSA units of competency for these Certificates are available as electives in PMB07 Plastics, Rubber and Cablemaking Training Package.

Application

This industry manufactures a wide range of polymer products and components ranging from consumer products to components to be included in other industrial or consumer products. Much of it is long runs of standard products, but equally it may be short runs/one offs of specialised products. It uses a wide range of natural and synthetic polymers covering thermoplastics as well as thermosetting polymers.

The products from this industry may be components in automobiles, aeroplanes and marine craft as well as domestic appliances and industrial and commercial plant and equipment. It may also be electrical or data cabling. They may equally be consumer products such as paint brushes, tooth brushes, lunch boxes or carry bags.

People with this qualification may be expected to operate production equipment and carry out a range of support functions

Training programs for this qualification are suitable to be undertaken as part of a formal training contract with an employer under an Australian Traineeship or Apprenticeship arrangement.

Pathways into the qualification

This qualification may be accessed by direct entry, or entry may also be gained through MSA10207 Certificate I in Process Manufacturing.

Units of competency contained within this qualification may be common with other manufacturing qualifications and credit should be granted towards this qualification where competency has already been achieved. Credit should also be granted towards this qualification where competency has been achieved in units of competency contained within relevant skill sets.

The units of competency in this qualification reflect competencies which are practiced within the industry and recognition of prior learning (RPL) should be granted where there is sufficient evidence of competency from work-based experience.

Pathways from the qualification

Further qualification pathways from this qualification include PMB30107 Certificate III in Polymer Processing

Additional qualification advice

MSA21108 Certificate II in Competitive Manufacturing and MSA20107 Certificate II in Process Manufacturing are available for those who need a more generalist qualification covering the application of good manufacturing practice and lean principles.

Licensing considerations

There are no specific licences that relate to this qualification. However, units of competency in this qualification may provide the underpinning knowledge and skills required for various licences. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete logs, reports and plant documentation • access and interpret production plans and information • provide appropriate workplace and technical information • give and follow routine instructions • provide written and oral reports
Teamwork	<ul style="list-style-type: none"> • work as part of a team • identify and describe own role and role of others • identify own role and responsibility within a team
Problem solving	<ul style="list-style-type: none"> • recognise known faults that occur during the operation • identify and take action on causes of routine faults • identify non-routine process and quality problems and take appropriate action • respond to routine problems
Initiative and enterprise	<ul style="list-style-type: none"> • suggest improvements • make adjustments to improve equipment performance • determine problems needing action • report problems outside area of responsibility • raise questions regarding requirements and expectations • distinguish between causes of faults • identify product out-of-specification • safely shut down equipment in abnormal circumstances
Planning and organising	<ul style="list-style-type: none"> • plan own work • achieve production targets • identify production targets • recognise hazards and follow appropriate hazard control methods
Self-management	<ul style="list-style-type: none"> • identify work requirements • plan own work requirements from production requests • operate within appropriate time constraints and work standards • select and use appropriate equipment, materials, processes and procedures • identify task outcomes and work role
Learning	<ul style="list-style-type: none"> • ask questions to gain information • seek clarification • participate in improvement procedures

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Technology	<ul style="list-style-type: none"> • check process is operating within required limits • monitor equipment operation • monitor operation of processes • use appropriate instruments • use power tools and electrical systems • monitor and adjust machine functions • use forklift controls, instruments and indicators
------------	--

Packaging Rules

Packaging Rules

To be awarded the Certificate II in Polymer Processing competency must be achieved in **fourteen (14)** units of competency:

- **three (3)** core units of competency
- **eleven (11)** elective units of competency, as specified below.

Note: Where prerequisite units apply, these must be considered in the total number of units chosen.

Core units of competency

Unit code	Unit title	Prerequisite
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS200A	Work safely	
MSAPMSUP210A	Process and record information	

Elective units of competency

Select **eleven (11)** units of competency, as specified below:

- a minimum of **three (3)** from Group A
- The remainder may be chosen from Groups A and B to bring the total number of electives to **eleven (11)**.

Note: Up to **four (4)** of the elective units can be chosen from other qualifications in this Training Package, other endorsed Training Packages and accredited courses, as specified in Group B.

Group A

Unit code	Unit title	Prerequisite
FPICOT2206B	Cross cut materials with a hand-held chainsaw	
MSAPMOPS200A	Operate equipment	
MSAPMOPS212A	Use enterprise computers or data systems	
MSAPMOPS244A	Layout and cut materials	
PMBFIN201C	Finish products and components	
PMBFIN202C	Fit attachments to products	
PMBFIN203C	Repair product imperfections	
PMBFIN205C	Hand decorate products	
PMBPREP201B	Prepare moulds for composites production	
PMBPREP205C	Assemble materials and equipment for production	
PMBPREP206C	Prepare materials to formulae	
PMBPROD206B	Operate ancillary equipment	
PMBPROD207B	Operate calender	
PMBPROD209C	Operate cable winding equipment	
PMBPROD210B	Operate injection moulding equipment	
PMBPROD211B	Operate blow moulding equipment	
PMBPROD212B	Operate thermoforming equipment	
PMBPROD213B	Operate extruders	
PMBPROD216B	Operate blown film equipment	
PMBPROD217B	Operate printing equipment	
PMBPROD221B	Operate rotational moulding equipment	
PMBPROD229B	Operate polystyrene shape moulding equipment	
PMBPROD233B	Operate film conversion equipment	

Unit code	Unit title	Prerequisite
PMBPROD235C	Use materials and process knowledge to complete work operations	
PMBPROD236C	Operate hand held air/power equipment for production processes	
PMBPROD237C	Splice cables	
PMBPROD238A	Perform creel rack operations	
PMBPROD239A	Build reinforced conveyor belts	
PMBPROD240C	Cut materials	
PMBPROD241C	Lay up rubber lining or lag pulleys	
PMBPROD242A	Bond polymers to surfaces	
PMBPROD245C	Fabricate materials	
PMBPROD246C	Hand mix materials	
PMBPROD247C	Hand lay up composites	
PMBPROD248C	Prepare surfaces for coating	
PMBPROD249B	Apply liquid surface coatings	
PMBPROD251B	Apply gel coat or other polymer surface finish	
PMBPROD252C	Operate compounding equipment	
PMBPROD253C	Operate an internal mill blender	
PMBPROD254C	Operate an open mill blender	
PMBPROD255C	Operate mixing equipment	
PMBPROD259C	Operate granulating equipment	
PMBPROD261B	Operate continuous vulcanising equipment	
PMBPROD262B	Operate tyre curing equipment	
PMBPROD263B	Operate retread curing equipment	
PMBPROD264C	Check recycle wash process	

Unit code	Unit title	Prerequisite
PMBPROD265C	Operate portable vulcanising equipment	
PMBPROD266B	Prepare tyre casings for retreading	
PMBPROD267B	Operate steel cutting equipment	
PMBPROD268B	Operate bead coiling equipment	
PMBPROD270B	Operate injection blow moulding equipment	
PMBPROD280B	Operate resin-glass depositor equipment	
PMBPROD281B	Finish composite products	
PMBPROD282B	Assemble mould	
PMBPROD283B	Demould product	
PMBPROD284B	Operate open flame moulding equipment	
PMBPROD285A	Operate computer controlled equipment	
PMBPROD287B	Weld plastics materials	
PMBPROD290B	Operate filament winding equipment	
PMBPROD291B	Operate resin infusion moulding equipment	
PMBPROD292B	Operate pultrusion equipment	
PMBPROD293B	Operate vacuum bagging equipment	
PMBPROD294B	Operate resin transfer moulding equipment	
PMBPROD295B	Operate composite sheeting equipment	
PMBPROD296B	Operate centrifugal casting equipment	
PMBPROD297B	Operate equipment using moulding compounds	
PMBPROD298B	Operate equipment using pre-preg material	
A maximum of two (2) units of competency may be chosen from the units in Groups A and B of PMB30107 Certificate III in Polymer Processing (at least one of which must be from Group A).		

Group B

Unit code	Unit title	Prerequisite
LMTGN2008B	Coordinate work of team/section	
MEM13003B	Work safely with industrial chemicals	
MEM16006A	Organise and communicate information	
MEM16007A	Work with others in a manufacturing, engineering or related environment	
MEM16008A	Interact with computing technology	
MEM18001C	Use hand tools	
MEM18002B	Use power tools/hand held operations	
MSS402002A	Sustain process improvements	
MSS402020A	Apply quick changeover procedures	
MSS402021A	Apply Just in Time procedures	
MSS402030A	Apply cost factors to work practices	
MSS402040A	Apply 5S procedures	
MSS402050A	Monitor process capability	
MSS402051A	Apply quality standards	
MSS402060A	Use planning software systems in operations	
MSS402080A	Undertake root cause analysis	
MSAPMOHS100A	Follow OHS procedures	
MSAPMOHS110A	Follow emergency response procedures	
MSAPMOHS205A	Control minor incidents	
MSAPMOHS210B	Undertake first response to non-fire incidents	
MSAPMOHS212A	Undertake first response to fire incidents	
MSAPMOHS216A	Operate breathing apparatus	

Unit code	Unit title	Prerequisite
MSAPMOHS217A	Gas test atmospheres	
MSAPMOHS220A	Provide initial first aid response	
MSAPMOPS100A	Use equipment	
MSAPMOPS101A	Make measurements	
MSAPMOPS102A	Perform tasks to support production	
MSAPMPER200C	Work in accordance with an issued permit	
MSAPMPER201A	Monitor and control work permits	
MSAPMPER205C	Enter confined space	*
MSAPMSUP100A	Apply workplace procedures	
MSAPMSUP101A	Clean workplace or equipment	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	
MSAPMSUP172A	Identify and minimise environmental hazards	
MSAPMSUP200A	Achieve work outcomes	
MSAPMSUP201A	Receive or despatch goods	
MSAPMSUP204A	Pack products or materials	
MSAPMSUP205A	Transfer loads	
MSAPMSUP230A	Monitor process operations	
MSAPMSUP240A	Undertake minor maintenance	
MSAPMSUP273A	Handle goods	
MSAPMSUP280A	Manage conflict at work	
MSAPMSUP291A	Participate in continuous improvement	
MSAPMSUP292A	Sample and test materials and product	
PMBHAN103C	Shift materials safely by hand	

Unit code	Unit title	Prerequisite
PMBHAN208C	Store products	
PMBWASTE101C	Collect waste for recycling or safe disposal	
RIIRIS201B	Conduct local risk control	
TLID2010A	Operate a forklift	
Up to four (4) relevant units of competency may be chosen from this Training Package, other endorsed Training Packages and accredited courses, where those units are available for inclusion at Certificates II or III.		