Australian Government

Department of Education, Employment and Workplace Relations

PMBPREP301C Set up and prepare for production

Revision Number: 1

PMBPREP301C Set up and prepare for production

Modification History

Not applicable.

Unit Descriptor

Unit descriptor
This competency covers the set-up and preparation of materials and equipment for production in the plastics, rubber and cablemaking sectors. It applies to batch, one-off and non-standard production lots.

Application of the Unit

Application of this unit
This competency applies to advanced operators who set up and prepare for the production process. The key factors are checking equipment and materials for conformity to specification and working to a process plan. This competency is typically performed by experienced operators working either independently or as part of a work team.
It includes:

- selecting and checking equipment and materials against specifications
- identifying requirements for special tooling and set-up
- drafting a work process plan, including objectives and timeframe
- preparing tools, equipment and materials
- setting up, checking and adjusting the production process
- identifying and planning own work requirements from production requests
- identifying and minimising any hazards connected with materials and process from materials safety data sheets, labels and workplace procedures
- checking settings and adjustments of equipment
- checking materials for conformity to job requirements
- correcting materials, equipment or process variations and making appropriate adjustments
- completing logs and reports.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites
This unit has **no** prerequisites.

Employability Skills Information

Employability Skills
The required outcomes described in this unit contain applicable Employability Skills. The Employability Skills Summary of the qualification(s) in which this unit is packaged will assist in identifying Employability Skill requirements.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes of a unit of competency	Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
ELEMENT	Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.
1. Select equipment and materials.	1.1 Identify equipment and materials from job specification. 1.2 Check equipment and materials for conformity to specification. 1.3 Note any variances in materials (within materials supplier specifications) which may require variation in production process settings. 1.4 Identify requirements for special tooling and set up. 1.5 Note conformity deficiencies and report to appropriate personnel. 1.6 Identify production objectives and timelines. 1.7 Clarify product specifications. 1.8 Draft work process plan, noting key quality characteristics, check points and activities where other personnel will be involved.
2. Prepare tools, equipment and materials.	2.1 Locate tools and equipment within workplace ensuring safety and operational checks are performed and equipment is appropriate for purpose. 2.2 Obtain materials specifications and confirm materials are at site for the commencement of production in accordance with established procedures. 2.3 Check materials are prepared to achieve product specification.
3. Set up and check production process.	3.1 Follow procedures for setup in accordance with workplace procedures, customer requirements and specifications. 3.2 Set machine control parameters in accordance with specifications. 3.3 Check work process plan and set up for conformity with identified workplace procedures and customer requirements. 3.4 Make any required adjustments to own work plan. 3.5 Obtain appropriate clearances for production to commence. 3.6 Check equipment for function and make provisional control settings.

ELEMENT	**PERFORMANCE CRITERIA**
ELEMENT	Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.
	3.7 Check performance of equipment and materials. 3.8 Adjust process settings and materials to ensure production outcomes are within quality specifications. 3.9 Make and store records of required adjustments within specification ranges in accordance with workplace procedures.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.
Application of knowledge of the materials, equipment and process sufficient to recognise material and equipment conditions which may lead to out of specification production.
Knowledge of organization procedures and relevant regulatory requirements along with the ability to implement them within appropriate time constraints and work standards.
Knowledge as a basis for solving processing and material problems including:

- products, materials and material characteristics
- behaviour of materials in relation to heat, pressure and time; quality requirements at each production stage
- function and operating principles of equipment, machine components and ancillary equipment
- impact of machine operating parameters on product quality and production output
- nature of mechanical, hydraulic, pneumatic, electrical and electronic principles which may effect machine operation and product development
- assessing operational capabilities of equipment
- predict materials behaviour
- adjust machine parameters
- assess production workflow in relation to focus of operation of work systems and equipment
- identify and correctly use equipment, processes and procedures
- plan own work including predicting consequences and identifying improvements
- interpret from production requests the correct selection and use of equipment, materials, processes and procedures
- maintain output and product quality using appropriate instruments, controls, test information and readings
- make adjustments to equipment operation to rectify variations in equipment operation or product quality
- check equipment for correct set-up to job specifications and implement adjustments or report deviations immediately
- start up equipment and make appropriate adjustments to bring process on line
- take samples when required and identify product out of specification
- safely shut down equipment in normal or abnormal circumstances
- identify and describe own role and role of others involved directly in the process
- identify factors which may affect product quality or production output and appropriate remedies
- identify when the operator is able to rectify faults and when assistance is required
- identify hazards of the materials and process
- implement appropriate procedures for hazard control
- use PPE, safely handle products and materials, read relevantsafety information and apply safety precautions appropriate to the task.

Language, **literacy and numeracy requirements**
This unit requires the ability to read and interpret typical product specifications, job sheets and material labels as provided to operators.
Writing is required to the level of completing workplace forms.
Numeracy is also required, eg to determine quantities required for production run/batch.

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

A holistic approach should be taken to the assessment.

Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability 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 handle products and materials safely, applying safety precautions appropriate to the task
- plan own work process within workplace procedures and explain the reasons for the steps in the process
- take appropriate action to observe equipment, materials and products for out of specification results, make adjustments and identify problems to be reported.

Consistent performance should be demonstrated. For example, look to see that:

- set-up conforms to organisation requirements
- production quality and output standards are met consistently
- problems are anticipated from process observations
- problems are efficiently resolved
- the process runs consistently and smoothly

Assessment method and context

Assessment will occur using industrial equipment and materials and will be undertaken in a work-like environment.

Competence in this unit may be assessed:

- on a processing plant, allowing for operation under all normal and a range of abnormal conditions
- in a situation allowing for the generation of evidence of the ability to respond to problems
  - by using a suitable simulation and/or a range of case studies/scenarios
  - through a combination of these techniques.

In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment. Assessors need to be aware of any cultural issues that may affect responses to questions.
Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Specific resources for assessment

This section should be read in conjunction with the Range Statement for this unit of competency. Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation. A bank of case studies/scenarios and questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.
Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified for people with disabilities.

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts. Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Context

This competency applies to experienced operators working either independently or as part of a work team.

Procedures

All operations are performed in accordance with procedures.
Procedures means all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

Tools and equipment

This competency includes use of equipment and tools such as:

- hand carts and trolleys
- hoists/lifting equipment not requiring any special permits or licences
- relevant personal protective equipment.

Hazards

Typical hazards include:

- moving heavy equipment/materials items
- materials spills
- fumes/dusts/vapours
- hazardous materials in gaseous, liquid or solid form
- manual handling hazards

Problems
Anticipate and solve problems means resolve a wide range of routine and non-routine problems, using product and process knowledge to develop solutions to problems which do not have a known solution/a solution recorded in the procedures.
Typical process and product problems may include:

- power or equipment failures
- temperature variations
- variations in materials
- contamination of materials
- faulty functioning of equipment.

Variables
Key variables to be monitored include:

- variations in the timing of machine cycles
- atmospheric variations
- variations in the sequence of product availability
- variations in the quality of the raw materials.
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Unit Sector(s)

Not applicable.