



Australian Government

PMBPROD255E Operate polymer mixing equipment

Release: 1

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Modification History

Release 1. Unit code and title changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Supersedes and is equivalent to PMBPROD255 Operate mixing equipment.

Application

This unit describes the skills and knowledge required to operate mixing equipment that is integral to the process of mixing materials to meet a specification or recipe, and typically used for urethane and rubber.

This unit applies to an individual working alone or as part of a team.

The unit principally refers to the importance of the 'in-process' batch mixing operation as part of the rubber and urethane moulding process (not composites).

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Pre-requisite Unit

Nil

Competency Field

Production – Rubber Processing, Urethanes

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Check work requirements	1.1 Identify requirements from job specifications 1.2 Perform pre-operational checks including checking for and acting on hazards
2. Start up equipment	2.1 Conduct pre-startup checks according to equipment specifications and work requirements 2.2 Start up mixing equipment according to equipment instructions
3. Operate mixing equipment	3.1 Check process is operating according to equipment specifications and work requirements

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	3.2 Ensure output meets job specifications and quality standards 3.3 Monitor and maintain supply of materials to support operation of equipment 3.4 Accurately complete logs and records 3.5 Apply waste management strategies to collect and segregate scrap, trim and other materials according to workplace procedures 3.6 Clean equipment and work area according to operational and workplace procedures 3.7 Pause and stop machine cycle in normal and abnormal circumstances according to workplace procedures
4. Respond to process control variances	4.1 Recognise and log process control variances and their issues 4.2 Determine, prioritise and implement remedial and preventative actions based on identified issues and causes 4.3 Accurately maintain records and logbooks

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

- Numeracy skills to interpret technical information.
- Reading skills to interpret specifications and workplace procedures.
- Writing and oral communication skills to record and report on polymer mixing equipment operations.

Other foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to PMBPROD255 Operate mixing equipment.

Links

Companion Volume implementation guides are found in VETNet – -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=932aacef-7947-4c80-acc6-593719fe4090>

Assessment Requirements for PMBPROD255E Operate polymer mixing equipment

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- operate polymer mixing equipment at least once to meet job specifications.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- the functions of polymer mixing equipment and ancillary equipment
- principles of operation of common mixing/blending equipment
- types and application of common mixing/blending equipment
- the criteria for overall process/equipment readiness for the process or equipment being used
- processing behaviour of polymers and the role of additives in this process
- production workflow sequences and materials demand
- key variables that may affect product quality and production output
- typical process and product problems, including early warning signs and corrective actions:
 - incorrect machine settings
 - incorrect type or quantity of materials
 - damaged equipment or equipment components
 - poor blending of raw materials
 - poor surface finish
 - poor colour dispersion
 - bubbles in mixture
- possible causes of process control variances, including:
 - raw material variations/contamination
 - process abnormalities
 - procedural errors
 - mechanical abnormalities
- organisational procedures relevant to the work environment or job role, including procedures for the emergency shutdown of equipment

- hazards that may arise in the job or work environment, and:
 - their possible causes
 - potential consequences
 - appropriate risk controls.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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