



Australian Government

PMBPROD254E Operate an open mill blender

Release: 1

PMBPROD254E Operate an open mill blender

Modification History

Release 1. Unit code changed. Application changed. Elements and Performance Criteria changed. Range of Conditions removed. Assessment Requirements changed. Supersedes and is equivalent to PMBPROD254 Operate an open mill blender.

Application

This unit describes the skills and knowledge required to operate an open mill blender or mixer used to compound rubber.

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

The unit principally refers to the operation of an 'open' rubber mill for specific compounding of polymer and rubber blends, requiring visual control and intermittent addition of chemicals

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 – Belt Production

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 housekeeping tasks to prepare for work to be undertaken 1.3 Perform pre-operational checks including checking for and acting on hazards
2. Conduct pre-startup checks	2.1 Check safety gates and guards are in position and working according to equipment specifications 2.2 Verify materials are correct against job specifications 2.3 Complete pre-startup checks according to equipment specifications and workplace procedures

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
3. Operate open mill blender	3.1 Start, operate and stop mill according to equipment instructions 3.2 Band, cut, fold and work rubber to meet job requirements 3.3 Add materials evenly at correct rate and time and blend to meet output standards 3.4 Check output meets specifications and quality standards 3.5 Apply waste management strategies to collect and reuse material, and segregate waste and scrap, according to workplace procedures 3.6 Clean, adjust and lubricate equipment according to equipment specifications and workplace procedures 3.7 Pause or stop machine in normal or abnormal circumstances according to workplace procedures
4. Respond to process control variances	4.1 Recognise and log process control variances and their causes 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 and perform measurement tasks.
- Reading skills to interpret specifications and workplace procedures.
- Writing and oral communication skills to record and report on open mill blender 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 PMBPROD254 Operate an open mill blender.

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 PMBPROD254E Operate an open mill blender

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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 an open mill blender at least once to meet job specifications.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- the functions of open mill blending equipment, machine components and guides and ancillary equipment
- principles of operation of the equipment
- the criteria for overall process/equipment readiness for the process or equipment being used
- the impact of common chemical reactions or mechanical processes on the state, form and condition of the materials
- purpose of developing elasticity and controlling temperatures
- effects of mastication, differential speed and overheating
- processing behaviour of polymers and the role of additives
- production workflow sequences and materials demand
- key variables that may affect product quality and production output, including:
 - speed
 - pressure
 - temperature
 - duration
 - output rate
 - product integrity
- typical process and product problems, including early warning signs, possible causes and corrective actions:
 - incorrect quantities of materials and machine adjustments
 - incorrect blending times
 - equipment issues and power failures
 - short scorch products

- forming the initial band
- adjusting the bank size for efficient mixing
- variations in and contamination of materials
- lack of a homogenous product
- 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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