



Australian Government

PMBPROD352E Produce compounded materials

Release: 1

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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 PMBPROD352 Produce compounded materials.

Application

This unit describes the skills and knowledge required to operate, control and optimise compounding processes.

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

The unit principally refers to the practical skills to operate compounding equipment, and produce compounded materials as a batch process that is fundamental to the rubber moulding sector. An operator at this level is expected to be able to set up non-routine or new compounded batch production jobs and manage or supervise routine production.

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 Manufacturing

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. Plan work requirements	1.1 Identify requirements from job specifications 1.2 Identify equipment and processes required for production and upstream and downstream operations from job specifications 1.3 Perform pre-operational checks including checking for and controlling hazards 1.4 Identify and check emergency stops, guards and controls 1.5 Identify checks and testing processes required for equipment, materials, quality and production management

Elements Elements describe the essential outcomes.	Performance Criteria Performance criteria describe the performance needed to demonstrate achievement of the element.
	1.6 Identify housekeeping and waste management strategies to collect excess, discarded or nonconforming materials to be disposed of, recycled or reprocessed according to workplace procedures
2. Start up compounding equipment	2.1 Verify equipment requirements against job requirements 2.2 Set production process according to equipment and work requirements, and adjust process to optimise output based on selected materials 2.3 Set up and adjust compounding equipment production line settings to meet equipment and job specifications 2.4 Verify materials are correct against job specifications 2.5 Set up date, batch and materials markings according to workplace procedures 2.6 Undertake other pre-startup checks according to equipment specifications and workplace procedures
3. Operate and make adjustments to compounding equipment	3.1 Start up and operate compounder process, and make adjustments to settings to meet job specifications 3.2 Ensure process is operating according to equipment specifications and workplace procedures 3.3 Follow checking and testing processes to assess if output meets job specifications and quality standards, and apply strategies for managing nonconforming outputs 3.4 Maintain continuity of process to support production 3.5 Accurately complete logs and records 3.6 Apply waste management strategies according to workplace procedures 3.7 Clean work area, and clean, adjust and lubricate machine/equipment, according to equipment specifications and workplace procedures 3.8 Pause or stop machine cycle in normal and abnormal circumstances according to workplace procedures
4. Shut down compounder	4.1 Determine type of shutdown and process to be followed from equipment instructions and workplace procedures 4.2 Purge machine using appropriate methods and materials 4.3 Shut down equipment according to equipment instructions and workplace procedures

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	4.4 Complete equipment clean-up and post-production adjustments in readiness for next startup, according to equipment specifications and workplace procedures 4.5 Put guards, locks and notices in place to prevent inadvertent startup 4.6 Accurately complete workplace shutdown documentation
5. Anticipate and solve process control variances	5.1 Recognise existing or potential process control variances and their causes 5.2 Determine, prioritise and implement remedial and preventative actions based on identified issues and causes 5.3 Monitor process control variances and corrective actions taken until resolved 5.4 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 equipment readings.
- Reading skills to interpret job and equipment specifications and workplace procedures.
- Writing and oral communication skills to record and report on product and production data, and process control variances.

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 PMBPROD352 Produce compounded materials.

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 PMBPROD352E Produce compounded materials

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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:

- produce compounded materials at least once to meet job specifications.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- the functions of compounding equipment and ancillary equipment
- the principles of operation of compounding equipment
- the compounding process and phases of the cycle
- types of materials and their characteristics, and the impact of variations in raw materials and equipment operation in relation to final product
- the criteria for overall process/equipment readiness for the process or equipment being used
- quality requirements at each production stage
- key variables that may affect product quality and production output, including:
 - temperature
 - speed
 - pressure
 - colour
 - mixing differences, steps and plasticity
 - cycle steps, time and timing
 - output rate
 - product weight
- typical and atypical process and product problems, including early warning signs, possible causes and corrective actions
- the distinguishing characteristics of causes of problems as being either based on the properties of materials or caused by process variables
- methods and materials for purging equipment, and their combinations and applications
- 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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