



Australian Government

PMBPROD321E Produce rotational moulded products

Release: 1

PMBPROD321E Produce rotational moulded products

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 PMBPROD321 Produce rotational moulded products.

Application

This unit describes the skills and knowledge required to operate, control and optimise rotational moulding processes to produce product.

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 rotational moulding equipment, as well as controlling rotational moulding production to meet the required product quality and output rate.

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 – Rotational Moulding

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 materials required, including additives, from job specifications 1.2 Identify 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, safety gates, guards and controls 1.5 Identify checks and testing processes required for equipment, materials, quality and production management to meet job

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	specifications 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 rotational moulding process	2.1 Verify equipment requirements against job requirements 2.2 Set production process according to equipment and work specifications, and adjust process to optimise output based on selected materials 2.3 Set up and adjust rotational moulding equipment settings to meet 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 rotational moulding equipment	3.1 Start up and operate rotational moulding equipment, 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 Work efficiently to minimise scrap and trim according to workplace procedures 3.6 Clean work area, and clean, adjust and lubricate equipment, according to equipment instructions and workplace procedures 3.7 Pause or stop machine cycle in normal and abnormal circumstances according to workplace procedures
4. Shut down equipment	4.1 Shut down equipment according to equipment instructions and workplace procedures 4.2 Complete equipment clean-up and post-production adjustments according to equipment instructions and workplace procedures 4.3 Put guards, locks and notices in place to prevent inadvertent startup

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
5. Anticipate and solve process and quality 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 and quality 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 specifications and workplace procedures.
- Writing and oral communication skills to record and report on rotational moulding production.

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 PMBPROD321 Produce rotational moulded products.

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 PMBPROD321E Produce rotational moulded products

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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 rotational moulded products at least once to meet job specifications.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- the functions of rotational moulding equipment and ancillary equipment
- the principles of operation of rotational moulding equipment
- mechanical and electrical principles that affect machine operation
- the rotational moulding manufacturing process and phases of the production cycle
- the criteria for overall process/equipment readiness for the process or equipment being used, including the importance of machine set-up and warm-up for effective processing of materials
- characteristics of materials and their behaviour in relation to process conditions and stages of production
- typical quality standards required at each stage of production
- key variables that may affect product quality and production output, including:
 - cycle time according to external temperatures and humidity
 - operating temperatures
 - type of heating used
 - cooling time
 - speed of rotation/movement
 - pattern of movement
 - colour of product
 - product integrity and general conformance to specification
- 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

- 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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