



Australian Government

PMBPROD210E Operate injection moulding equipment

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 PMBPROD210 Operate injection moulding equipment.

Application

This unit describes the skills and knowledge required to operate injection moulding equipment for routine production processing.

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

This unit principally refers to the operator understanding how the equipment operates to fill the moulds and eject polymer mouldings under routine operational requirements in the workplace, and demonstrating this in practice.

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 – Injection 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. Check work requirements	1.1 Identify requirements from production plan or request or job specifications 1.2 Verify product, materials and equipment to meet requirements for job 1.3 Identify and perform housekeeping tasks in preparation for work to be undertaken 1.4 Perform pre-operational checks including checking for and acting on hazards, and following workplace procedures to receive handover of equipment from another machine operator

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
2. Operate injection moulding equipment	2.1 Check process is operating according to equipment specifications in relation to temperature, cycle time, clamp pressure and mould temperature control 2.2 Check product weight is in specification and to required quality standard 2.3 Ensure product is ready for next manufacturing operation according to job requirements 2.4 Monitor and maintain supply of polymer materials to support operation of equipment 2.5 Accurately complete logs and records 2.6 Clean equipment and work area according to operational and workplace procedures 2.7 Pause and stop machine cycle in normal and abnormal circumstances according to workplace procedures
3. Respond to machine process control variances	3.1 Recognise and log process control variances and their issues 3.2 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 injection moulding 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 PMBPROD210 Operate injection moulding 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 PMBPROD210E Operate injection moulding 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 injection moulding equipment at least once, including monitoring of equipment using measured or indicated data and senses as required to meet work requirements.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- the function of injection moulding equipment machine components and ancillary equipment, including:
 - fixed frame
 - injection unit
 - clamping unit
 - mould space
- principles of operation of injection moulding equipment
- types of injection moulding machines
- safety interlocks and their function during machine operation
- processing behaviour of polymers and the role of additives
- the criteria for overall process/equipment readiness for the process and equipment being used
- injection moulding production workflow sequences and materials demand
- typical quality standards at each stage of production
- key variables that may impact product quality and production output, including:
 - machine conditions
 - production rate, including cycle time, injection time and speed
- typical process and product problems, including early warning signs, possible causes and corrective actions
- 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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