



Australian Government

PMBPROD370E Produce injection blow moulded products

Release: 1

PMBPROD370E Produce injection blow 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 PMBPROD370 Produce injection blow moulded products.

Application

This unit describes the skills and knowledge required to safely operate, control and optimise injection blow moulding processes to produce injection blow moulded products to specifications.

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

The unit principally refers to the injection moulding part of the machine, which makes the first-stage – or preform – object, and uses normal injection moulding technology but only for a limited range of plastics, and the specialised skills and knowledge required for the stretch blow (second) stage in the next part of the compound machine set-up.

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 – Extrusion Blow Moulding, Injection Blow 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 requirements, including additives and their amounts or percentage ratios, 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, checking planned and historical maintenance fixes and confirming that any historical issues have been appropriately addressed

Elements Elements describe the essential outcomes.	Performance Criteria Performance criteria describe the performance needed to demonstrate achievement of the element.
	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 to meet job specifications 1.6 Identify housekeeping tasks and waste management strategies according to workplace procedures 1.7 Check availability of post-moulding labelling, packaging and storage consumables to complete task once in operation
2. Perform pre-production tasks	2.1 Verify equipment requirements against job specifications 2.2 Set production process according to equipment and workplace specifications, and adjust process to optimise output based on selected materials 2.3 Set up and adjust equipment production line settings according to 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 safe workplace procedures
3. Operate and make adjustments to injection blow moulding process	3.1 Start up and safely operate moulding processes, and make adjustments to settings to meet job specifications 3.2 Operate injection and blow moulding equipment safely, and adjust settings to meet job specifications 3.3 Ensure process is operating according to equipment specifications and workplace procedures 3.4 Follow checking and testing processes to confirm if output meets job specifications and quality standards, and apply strategies to manage nonconforming outputs 3.5 Maintain continuity of process to support production requirements 3.6 Accurately complete logs and records and any observations that require attention 3.7 Apply waste management strategies to collect excess, discarded or nonconforming materials to be disposed of, recycled or reprocessed according to safe workplace procedures 3.8 Clean work area, and clean, adjust and lubricate equipment,

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	according to equipment specifications and workplace procedures 3.9 Pause or stop machine cycle in normal and abnormal circumstances according to safe workplace procedures
4. Anticipate and solve process control variances	4.1 Recognise existing or potential process control variances and their causes 4.2 Determine, prioritise and implement remedial and preventative actions based on identified issues and causes 4.3 Monitor process control variances and corrective actions taken until resolved 4.4 Accurately complete records and logbooks
5. Shut down injection blow moulding equipment	5.1 Shut down equipment according to equipment instructions and safe workplace procedures 5.2 Complete equipment clean-up and post-production adjustments according to equipment instructions and safe workplace procedures 5.3 Put guards, locks and notices in place to prevent inadvertent startup 5.4 Accurately complete workplace shutdown documentation, including logging any identified safety issues or concerns that require attention and notifying management and/or maintenance for action

Foundation Skills

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

- Reading skills to interpret job and equipment specifications and workplace procedures.
- Writing and oral communication skills to record and report on shutdowns 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 PMBPROD370 Produce injection blow 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 PMBPROD370E Produce injection blow 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 injection blow moulded products at least once to meet job specifications.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- the functions of injection blow moulding equipment and machine components
- the characteristics and properties of plastic materials and additives commonly used in this moulding/manufacturing process:
 - physical and end-use applications
 - operating temperatures during processing
 - chemical resistance
- the principles of operation of injection blow moulding equipment and ancillary equipment
- mechanical, hydraulic, pneumatic, electrical and electronic principles that affect machine operation, and their respective safety hazards
- injection blow moulding manufacturing process and sequences of the cycle
- the criteria for overall process/equipment readiness for the process or equipment being used
- typical quality standards required at each stage of production
- key variables that may affect product quality and production output, including:
 - pre-form temperature
 - operating temperatures
 - machine cycle sequence times
 - primary and secondary pressures
 - set of the stretch
- typical and atypical 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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