



Australian Government

MEM04042 Develop and manufacture vacuum forming moulds and associated equipment

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM04015 Develop and manufacture vacuum forming moulds and associated equipment (Release 2).

Application

This unit of competency defines the skills and knowledge required to develop and manufacture vacuum forming moulds and associated equipment.

Where the assembly of plated patterns is required, unit MEM04039 Assemble plated patterns should also be selected.

Where the manufacture of production patterns is required, unit MEM04041 Develop and manufacture production patterns should also be selected.

Where the selection and use of precision measurement is required, unit MEM12003 Perform precision mechanical measurement should also be selected.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 6

Pre-requisite Unit

MEM04038 Produce polymer patterns

MEM04018 Perform general woodworking machine operations

MEM07005 Perform general machining

MEM09002 Interpret technical drawing

MEM11011 Undertake manual handling

MEM12006 Mark off/out (general engineering)

MEM12023 Perform engineering measurements

MEM12024 Perform computations

MEM12026 Perform advanced trade calculations in a manufacturing, engineering or related environment

MEM13003 Work safely with industrial chemicals and materials

MEM13015 Work safely and effectively in manufacturing and engineering

MEM14006 Plan work activities

MEM16006 Organise and communicate information

MEM18001 Use hand tools

Competency Field

Casting and moulding

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine job requirements	1.1 Follow standard operating procedures (SOPs) 1.2 Comply with work health and safety (WHS) requirements at all times 1.3 Use appropriate personal protective equipment (PPE) in accordance with SOPs 1.4 Identify job requirements from specifications
2. Develop and mark out pattern for vacuum forming	2.1 Apply vacuum forming processes to determine the design of vacuum forming moulds and construct associated equipment 2.2 Select appropriate material to meet specifications 2.3 Calculate pattern parameters, taking into account plastic sheet thickness and shrinkage 2.4 Mark out vacuum forming pattern, showing size and position of air evacuation and of the moulded form
3. Manufacture pattern for vacuum forming	3.1 Select and use appropriate machines and machining process to shape and produce vacuum forming pattern to specifications 3.2 Select and use hand and hand-held power tools to fashion and manufacture vacuum forming patterns to specifications 3.3 Check constructed vacuum forming pattern meets specifications

Foundation Skills

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

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.	
<i>Specifications include one or more of the following:</i>	• drawings • job sheets • work instructions.
Vacuum forming processes include one or more of the following:	• positive pressure • negative pressure.
Material includes one or more of the following:	• timber • epoxy resins • composites • polymer • metal.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM04015 Develop and manufacture vacuum forming moulds and associated equipment (Release 2).

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>
