



Australian Government

MEM04040 Develop and manufacture polystyrene patterns

Release: 1

MEM04040 Develop and manufacture polystyrene patterns

Modification History

Release 1. Supersedes and is equivalent to MEM04013 Develop and manufacture polystyrene patterns (Release 2).

Application

This unit of competency defines the skills and knowledge required to develop and manufacture patterns using polystyrene, including patterns for the lost foam process and for those areas on a wood pattern and core box where polystyrene is required.

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: 2

Pre-requisite Unit

MEM04018 Perform general woodworking machine operations

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

MEM13015 Work safely and effectively in manufacturing and engineering

MEM14006 Plan work activities

MEM16006 Organise and communicate information

MEM18001 Use hand tools

MEM18002 Use power tools/hand held operations

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 1.5 Select polystyrene of appropriate bead size and identity to meet specifications
2. Develop and mark out polystyrene pattern	2.1 Determine contraction allowance by performing calculations 2.2 Mark out pattern or pattern components to specifications
3. Manufacture pattern	3.1 Join and secure pattern components in an appropriate manner using adhesives appropriate to the task 3.2 Select appropriate tools and techniques to manufacture polystyrene patterns to specifications 3.3 Check pattern for conformance to specifications and mark for identification
4. Protect pattern from damage	4.1 Handle and store patterns in a safe manner least likely to cause damage using appropriate procedures

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.
Adhesives include one or more of the following:	• PVA • hot glue.
Tools include one or more of the following:	• hot wire • knives • saws.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM04013 Develop and manufacture polystyrene patterns (Release 2).

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>