



Australian Government

MEM04004 Prepare and mix sand for metal moulding

Release: 1

MEM04004 Prepare and mix sand for metal moulding

Modification History

Release 1. Supersedes and is equivalent to MEM04004B Prepare and mix sand for metal moulding

Application

This unit of competency defines the skills and knowledge required to prepare and mix sand for metal moulding in continuous and batch type mills.

Where the interpretation of technical drawings is required unit MEM09002 Interpret technical drawing should also be selected.

Where the selection and use of engineering measuring equipment is required unit MEM12023 Perform engineering measurements should also be selected.

Where calculations are required unit MEM12024 Perform computations should also be selected.

Where the selection and use of tools is required unit MEM18001 Use hand tools and unit MEM18002 Use power tools/hand held operations, should also be selected as appropriate.

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

Band: A

Unit Weight: 4

Pre-requisite Unit

MEM11011	Undertake manual handling
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

Competency Field

Casting and moulding

Elements and Performance Criteria

Elements describe the essential outcomes. Performance criteria describe the performance needed to demonstrate achievement of the element.

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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, job sheets or work instructions
2 Load mixer	2.1 Perform all pre start-up checks according to procedures
	2.2 Determine formula for sand mix according to specifications
	2.3 Measure and load materials according to formula specification
3 Mix sand	3.1 Mix sand for correct time to specifications
	3.2 Monitor the performance of mixer and the condition of the sand
	3.3 Maintain material supply
	3.4 Report faults
4 Take and test samples	4.1 Extract sample in an appropriate manner
	4.2 Apply test in accordance with procedures
	4.3 Compare test results against specifications
	4.4 Adjust mix as required to meet specifications
5 Discharge mixture	5.1 Charge load according to SOPs
	5.2 Dispose of unwanted treated sand according to SOPs

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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|---|--------------------|-----|---|
| 6 | Clean mixer | 6.1 | Shut down mixer to standard safety and operating procedures |
| | | 6.2 | Clean mixer |

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

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.

Materials include one (1) or more of the following:

- sand
- silica
- zircon
- chromite
- mixtures and water

Faults include:

- chemical ratios – acid, binder and water

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM04004B Prepare and mix sand for metal moulding

Links

Companion Volume implementation guides are found in VETNet -

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

