



Australian Government

MEM25004 Fair and shape surfaces

Release: 1

MEM25004 Fair and shape surfaces

Modification History

Release 1. Supersedes and is equivalent to MEM25004B Fair and shape surfaces

Application

This unit of competency defines the skills and knowledge required to fill, sand, fair and grind to achieve uniform or correct contours and surfaces on marine vessels and other transport vehicles.

Where slipping is required, or when working on a slipped craft unit MEM25014 Perform marine slipping operations should also be selected.

Where relevant units related to specific applications and materials are required appropriate units 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

MEM11011	Undertake manual handling
MEM13003	Work safely with industrial chemicals and materials
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information
MEM18001	Use hand tools
MEM18002	Use power tools/hand held operations

Competency Field

Marine craft construction

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 and determine sequence of operations |
| | | | |
| 2 | Prepare for filling/sanding/grinding operations | 2.1 | Set up safety equipment in accordance with procedures |
| | | 2.2 | Select appropriate fillers and abrasive materials and prepare to suit job requirements and required surface finish |
| | | 2.3 | Select appropriate equipment and accessories and set up ready for operation |
| | | | |
| 3 | Perform filling, sanding, fairing and grinding operations | 3.1 | Carry out work to specified finishes using appropriate tools and techniques |
| | | 3.2 | Use power tools to optimise equipment and material use |
| | | 3.3 | Check surfaces to ensure compliance to specifications |
| | | 3.4 | Make adjustments and corrections as required |

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.

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

- electric or pneumatic disc
- orbital and belt sanders
- ‘torture-boards’
- straight and angle grinders
- die grinders can be used for certain applications but should not be used as the sole tool for assessment purposes

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM25004B Fair and shape surfaces

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for MEM25004 Fair and shape surfaces

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and selecting materials to be prepared
- setting up safety equipment, including fans and extraction unit, in accordance with procedures
- selecting and preparing appropriate fillers and abrasive materials for required surface finish
- setting up and using a selection of hand and power tools using associated safety accessories, including dust extraction assemblies and guard protection
- surface filling and internal and external sanding to achieve flat, concave and convex surfaces
- checking surfaces to ensure compliance visually and by the use of fairing battens, straightedges, stringlines, french curves and templates.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- filling and fairing specifications
- types, properties and characteristics of fillers and materials to be prepared and features/specific preparation requirements
- filler ingredient measuring and preparation techniques
- relevant safety equipment and uses/application
- filling, fairing and shaping techniques
- equipment and accessories and applications
- means of optimising life of abrasive materials and reducing waste
- compliance testing procedures.

Assessment Conditions

- Assessors must:

- have vocational competency in fairing and shaping surfaces at least to the level being assessed with relevant industry knowledge and experience
- satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

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