



Australian Government

MEM08011 Prepare surfaces using solvents and/or mechanical means

Release: 1

MEM08011 Prepare surfaces using solvents and/or mechanical means

Modification History

Release 1. Supersedes and is equivalent to MEM08011B Prepare surfaces using solvents and/or mechanical means

Application

This unit of competency defines the skills and knowledge required to select the appropriate preparation process, select and set up the equipment, undertake blasting or application of solvents on metal and non-metal materials, and check the finished surface.

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

Where the selection and use of engineering measurement is required unit MEM12023 Perform engineering measurements 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

Surface finishing

Elements and Performance Criteria

Elements describe the essential outcomes.

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

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 surface preparation requirements from specifications, job sheets or work instructions
2	Prepare to undertake work	2.1	Select appropriate solvent and solvent application to meet job specification
		2.2	Select appropriate mechanical equipment to meet job specification
		2.3	Prepare worksite for surface cleaning activities
3	Set up equipment	3.1	Set up and prepare appropriate equipment and any required consumables in accordance with manufactures' specifications and SOPs
4	Prepare surfaces using solvents as required	4.1	Establish safe working environment for solvent use according to regulatory requirements and SOPs
		4.2	Apply solvent in accordance with procedures
		4.3	Neutralise treated surface and make it safe to handle
5	Prepare surfaces using mechanical means as required	5.1	Establish safe working environment for mechanical surface preparation according to regulatory requirements and procedures
		5.2	Prepare surfaces using mechanical means
		5.3	Clean mechanical equipment and check for damage and

Elements describe the essential outcomes.

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

operational faults, in accordance with procedures

5.4 Record any equipment faults and report in accordance with SOPs

6 **Inspect prepared surface**

6.1 Check surface preparation for cleanliness and conformance to specifications

6.2 Rectify faults or defects where required and record/report in accordance with procedures

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, accessibility of the item, and local industry and regional contexts) are included.

Surface preparation includes the following:

- new surfaces and restoration work

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

- acids
- chlorinated solvents
- hydrocarbons

Solvent application methods include one (1) or more of the following:

- spraying
- wiping
- brushing
- vapour degreasing

Mechanical equipment includes one (1) or more of

- linishers
- grinders

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, accessibility of the item, and local industry and regional contexts) are included.

the following:

- polishers
- sanders
- blast device
- enclosures
- air grinders

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

- emery cloth/belts
- grinding/sanding disks
- grinding accessories

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM08011B Prepare surfaces using solvents and/or mechanical means

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 MEM08011 Prepare surfaces using solvents and/or mechanical means

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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
- determining the type of surface preparation required for a range of surfaces
- selecting and setting up surface preparation equipment and consumables for the job
- undertaking mechanical preparation or application of solvents, as required
- inspecting the finished surface to ensure it meets specifications
- rectifying faults or defects, as required.

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)
- common surface contaminants, conditions
- features of and reasons for selecting solvents
- characteristics and uses of mechanical equipment required for surface preparation and procedures for setting up equipment
- specifications applying to surfaces to be prepared
- methods for neutralising solvents
- tools, equipment, abrasives and other materials used in surface preparation
- procedures for maintaining/storing mechanical equipment and for recording/reporting faulty equipment
- procedures for checking prepared surfaces and rectification techniques where necessary to meet specifications.

Assessment Conditions

- Assessors must:
 - have vocational competency in preparing surfaces using solvents and/or mechanical means 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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