



Australian Government

MEM08013 Prepare surfaces by abrasive blasting (advanced)

Release: 1

MEM08013 Prepare surfaces by abrasive blasting (advanced)

Modification History

Release 1. Supersedes and is equivalent to MEM08013B Prepare surfaces by abrasive blasting (advanced)

Application

This unit of competency defines the skills and knowledge required to perform, at an advanced level of skill, surface preparation using abrasive blasting.

The operation and maintenance of compressed air systems and associated items, including emergency shutdown procedures is included.

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.

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

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

Band: A

Unit Weight: 4

Pre-requisite Unit

MEM08012	Prepare surfaces by abrasive blasting (basic)
MEM08016	Control blast coating by-products, materials and emissions
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

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 job requirements from specifications, job sheets or work instructions |
| | | |
| 2 | Prepare to undertake work | 2.1 Select appropriate abrasive blasting process and equipment to meet job specification |
| | | 2.2 Select appropriate abrasive blasting media to meet job specification |
| | | 2.3 Prepare worksite for surface cleaning activities |
| | | |
| 3 | Set up equipment | 3.1 Assemble, set up and correctly and safely prepare appropriate equipment and any required consumables in accordance with manufacturers' specifications and workplace procedures |
| | | 3.2 Select correct rust inhibitor to reduce corrosion for use in wet abrasive blast methods, where required |
| | | 3.3 Carry out pre-operational checks on equipment, rectify faults or report for further action |
| | | |
| 4 | Inspect surface prior to cleaning | 4.1 Inspect work piece prior to cleaning in accordance with procedures |
| | | 4.2 Report identified faults/defects requiring remedial or pre-treatment action, as required |
| | | |
| 5 | Prepare surfaces | 5.1 Operate blasting equipment in accordance procedures |

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
using abrasive blasting		5.2	Undertake emergency shutdown procedures, as required
		5.3	Undertake work to meet environmental requirements
		5.4	Carry out abrasive media disposal in accordance with environmental requirements and procedures
		5.5	Disassemble, clean and inspect blasting equipment in accordance with manufacturers' specifications
		5.6	Record equipment faults and report in accordance with SOPs
6 Inspect prepared surface	6.1	Assess surface preparation for cleanliness and conformance with specifications	
	6.2	Rectify faults or defects where required and record inspection results and report in accordance with SOPs	

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.

- Blasting process includes one (1) or more of the following:**
- wet
 - dry
 - vacuum automatic rotary
 - centrifugal
 - water blasting (including HP and UHP)

- Blasting media includes**
- garnet

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one (1) or more of the following:

- ilmenite
- slags
- steel grit
- steel shot
- water
- glass bead
- soda

Equipment includes one (1) or more of the following:

- blast nozzles
- compressors
- blast and helmet ventilation
- air hoses
- blast pots
- nozzles
- safety equipment

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM08012B Prepare surfaces by abrasive blasting (advanced)

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 MEM08013 Prepare surfaces by abrasive blasting (advanced)

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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 interpreting specifications, supplier information and Australian and international standards for advanced abrasive blasting
- determining the appropriate means of preparing surfaces by abrasive blasting
- selecting, setting up, using and maintaining surface blasting equipment safely and effectively, reporting any faults
- demonstrating emergency shutdown procedures
- selecting and using the correct media for the blasting operation and preparing surfaces
- disposing of abrasive media in accordance with regulatory and legislative requirements
- inspecting to ensure the prepared surface meets specifications and rectifying any non-conformance, as necessary.

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)
- calculations and numerical operations for surface preparation using advanced blasting operations
- blasting media features and uses
- equipment for the selected method
- inspection procedures for surface preparation
- procedures for using abrasive blasting equipment
- reasons for an emergency shutdown
- emergency shutdown procedures
- specifications, supplier information and Australian and international standards for advanced abrasive blasting
- procedures for abrasive media disposal to meet environmental requirements.

Assessment Conditions

- Assessors must:
 - have vocational competency in preparing surfaces by abrasive blasting (advanced) 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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