



Australian Government

MEM08014 Apply protective coatings (basic)

Release: 1

MEM08014 Apply protective coatings (basic)

Modification History

Release 1. Supersedes and is equivalent to MEM08014B Apply protective coatings (basic)

Application

This unit of competency defines the skills and knowledge required to follow pre-determined procedures to spray pre-treatments and protective coatings at a basic level where an understanding of specific health and safety matters is required. It covers single and two-pack coatings not containing isocyanates.

Where isocyanates are present unit MEM08015 Apply protective coatings (advanced) should also be selected.

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

Where the selection and use of mobile load shifting equipment is required unit MEM11004 Undertake dogging and unit MEM11010 Operate mobile load shifting equipment, should also be selected as appropriate.

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, 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
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	Identify job requirements from specifications, job sheets or work instructions
		1.4	Identify and interpret supplier information, product details, Australian and international standards, regulatory and legislative requirements relevant to the work to be undertaken
2	Prepare to undertake work	2.1	Obtain required protective coating materials according to job requirements
		2.2	Gather required protective coating application equipment according to job requirements
		2.3	Prepare worksite for application of protective coating
3	Select and maintain personal protective equipment (PPE)	3.1	Select and use appropriate personal protective equipment (PPE) for coating application according to job requirements and SOPs
		3.2	Identify and use ancillary support attachments
		3.3	Maintain PPE in accordance with manufacturers' specification and SOPs
4	Prepare work piece for application of protective coating	4.1	Inspect surface condition for readiness for application of protective coating according to specification
		4.2	Identify unsuitable work pieces/surfaces and fabrication defects and undertake appropriate remedial action or

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	report in accordance with SOPs
	4.3 Mask components where protective coating application is not specified
	4.4 Identify conditions for overspray
Prepare equipment for application of surface coating materials	5.1 Undertake routine maintenance on plant and equipment in accordance with procedures 5.2 Record status/report by proforma or orally in accordance with procedures 5.3 Assemble conventional coating application equipment in accordance with equipment requirements
6 Apply single pack coatings	6.1 Identify coating product type, solvent, uses, mixing procedure, clean-up and safety requirements, as appropriate 6.2 Demonstrate correct method of wet film thickness in accordance with specified dry film 6.3 Thin coating material to suit the application method and achieve required film thickness 6.4 Apply coating using specified application method 6.5 Use coating schedules for metal and non-metal materials 6.6 Monitor coating application and curing technique according to SOPs
7 Clean and store equipment	7.1 Clean and disassemble conventional coating application equipment and inspect for damage 7.2 Record and report faulty equipment to appropriate personnel in accordance with SOPs 7.3 Store coating application equipment in accordance with SOPs

Elements describe the essential outcomes.

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

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|---|-------------------------------|-----|---|
| 8 | Inspect finish surface | 8.1 | Assess surface finish for profile size differences and uses |
| | | 8.2 | Determine coating thickness using appropriate instruments and compare results with job specifications |
| | | 8.3 | Inspect total surface for conformance to specification in accordance with SOPs |
| | | 8.4 | Record inspection results 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.

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

- brush
- roller
- conventional spray equipment

Specific health and safety matters include one (1) or more of the following:

- interpretation of safety data sheet (SDS) warnings
- materials sensitivity
- hazardous goods
- breathable air
- introduction of compressed air into the body

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

- hand protection
- full body protection
- respirators
- air fed hoods and foot protection

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.

- noise and heat protection

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM08014B Apply protective coatings (basic)

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 MEM08014 Apply protective coatings (basic)

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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, product details, Australian and international standards, regulatory, legislative requirements and other applicable reference documents in applying protective coatings
- determining the procedures, equipment and processes for applying protective coatings to work
- setting up, maintaining and using personal protective equipment (PPE) suitable for the coating work to be undertaken
- determining the condition and treatment required for the surface/s to be protective coated and masking up, as required
- setting up, operating, cleaning and maintaining coating equipment safely and effectively
- selecting, handling and using protective coating materials safely and in required quantities
- checking surface coating thickness and coverage to ensure it meets specification and rectifying any faults.

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) and use of appropriate supports
- relevant information on purposes, use and application of protective coating equipment and materials
- safety issues, adequate precautions and awareness of other site factors that could be affected by the work
- what constitutes deviation from a specified surface finish/condition and standard workplace procedures for identifying unsuitable work items
- method of locating areas to be protected from coating process and masked
- how to recognise areas subject to overspray and requiring protection
- operation and maintenance of protective coating application plant and equipment using SOPs

- requirements for completion and processing of maintenance reports
- coating work piece assembly specifications and procedures
- procedures for identifying coating types and processing solvents, including mixing and safe handling practices
- procedures for determining the wet film thickness of a coating from the specified dry film thickness using calculations and a specified formulation
- procedures for thinning coating materials for use in applying the specified film thickness coating to a substrate
- procedures to apply protective coatings to comply with an established standard
- procedures for controlling coating application and curing techniques
- procedures for disassembly, cleaning, checking and storing/protecting coating equipment
- assessing the profile of the surface finish using procedures and other relevant standards
- features and use of dry film thickness testing instruments
- surface inspection procedures, including the extent and detail of inspection as required
- requirements for completion and processing of inspection reports
- manufacturers' specifications and procedures for inspecting and maintaining personal protective equipment in the workplace
- recording and reporting procedures for defective parts.

Assessment Conditions

- Assessors must:
 - have vocational competency in applying protective coatings (basic) 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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