



Australian Government

MEM08004 Finish work using wet, dry and vapour deposition methods

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM08004B Finish work using wet, dry and vapour deposition methods

Application

This unit of competency defines the skills and knowledge required to finish work using a range of wet and dry organic coatings by hand or utilising a wide range of machines or semi or fully automatic plant.

Where straightforward monitoring of semi or automatic machine or process is undertaken unit MEM07024 Operate and monitor machine and process should 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 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

MEM08002	Pre-treat work for subsequent surface coating
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	Assess and prepare components for required coating process	2.1	Identify coating specifications from operation sheets/work procedures
		2.2	Check suitability of pre-treated components for finishing process according to enterprise procedures
		2.3	Prepare components for finishing application, as required
		2.4	Position/locate components for finishing according to enterprise procedures
3	Perform simple mixing and estimating operations	3.1	Calculate mixing ratios and mix and thin a range of wet coatings to SOPs, as required
		3.2	Estimate required coating quantities using simple surface area calculations
4	Perform coating operation	4.1	Set up equipment to specification
		4.2	Monitor coating and applied curing technique
		4.3	Check coating application, thickness and colour and maintain for compliance with specifications

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.

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

- electrostatic powder coating
- electrophoretic coating
- industrial spray coating and lacquering
- electroless (auto catalytic) nickel or copper plating
- phosphating
- chromating
- galvanising
- hot tinning
- sputter deposition
- vacuum evaporation
- ion plating
- paints
- stains
- other liquid finishes

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

- visual inspection for contamination
- masking out
- racking
- identification of correct materials to be used
- ensuring cleanliness of work area and equipment
- operational testing of equipment

Coating operation includes one (1) or more of the following:

- spray application
- dip coating

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM08004B Finish work using wet, dry and vapour deposition methods

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 MEM08004 Finish work using wet, dry and vapour deposition methods

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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 components for coating, checking their condition and suitability for coating to accurately determine the process and materials required
- preparing and locating components for coating
- calculating surface area of components to be coated to determine the required coating quantities
- setting up and operating coating equipment, coating products and curing the coating
- checking that the thickness and colour meets specifications.

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)
- coating work and the correct process to be used for given components
- coating specifications
- appropriate type of racking for the coating process and reasons for selecting the chosen rack type
- procedures for racking components to be coated
- source of data on mixing ratios for wet coatings to determine mixing ratios for given tasks
- function of thinners as applied to the application of wet coatings
- procedures to be followed when mixing wet coatings
- calculation techniques to determine the surface area to be coated and the coverage rate of the coating material to be applied
- procedures for estimating quantities of coating materials
- types of equipment used for a variety of coating processes and reasons for selecting the chosen equipment for given coating tasks
- operating procedures applicable to the selected coating equipment

- coating and curing techniques and reasons for selecting the chosen coating and curing techniques
- monitoring coating procedures to be followed
- examples of coating defects and their causes
- procedures for rectifying and/or reporting coating defects
- coating thickness and colour to be achieved and the means of checking this including the frequency of checks to be undertaken.

Assessment Conditions

- Assessors must:
 - have vocational competency in finishing work using wet, dry and vapour deposition methods 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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