



Australian Government

MEM08005 Prepare and produce specialised coatings

Release: 1

MEM08005 Prepare and produce specialised coatings

Modification History

Release 1. Supersedes and is equivalent to MEM08005B Prepare and produce specialised coatings

Application

This unit of competency defines the skills and knowledge required to undertake masking and jig work, determine operational parameters, and pre-treat and treat work for an application of specialised production of industrial films on a variety of work pieces, often on a one-off basis.

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	Undertake mask and jig work	2.1	Manufacture necessary jigs and shields, as required
		2.2	Secure jigs and ensure masking is adherent and stable
		2.3	Incorporate necessary auxiliary anodes and shields to specifications
3	Pre-treat and treat work	3.1	Use plating information and/or specifications to calculate operating times, currents and/or voltages
		3.2	Treat work in accordance with specifications using 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.

Coatings include one (1)

- heavy (hard) chromium or nickel
- heavy electroless nickel

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or more of the following:

- 'hard' anodising
- selective (brush) plating

Auxiliary electrodes and shields include one (1) or more of the following:

- soluble auxiliary anodes
- insoluble auxiliary anodes
- bi polar electrodes
- shields
- robbbers

Unit Mapping Information

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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 MEM08005 Prepare and produce specialised coatings

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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
- using and/or making jigs and shields and masking up for a variety of work pieces prior to application of specialised coatings
- setting up auxiliary anodes and shields as necessary for the coating application
- calculating coating parameters and pre-treating and applying coatings to meet 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)
- reasons for pre-electroplating and post-electroplating treatment of surfaces
- processes and techniques for masking work being electroplated and the range of materials used for masking purposes
- procedures for securing the masking
- procedures for mounting/setting up auxiliary electrodes and shields and reasons for using them
- electrode position of 'difficult' metals such as iron and certain alloys
- specifications and procedures of jigs and shields to be manufactured
- procedures and formulae for calculating operating times, currents and voltages
- specifications of surface finishes
- procedures and specifications for pre-treating specialised coating work and for treating the work after electroplating.

Assessment Conditions

- Assessors must:
 - have vocational competency in preparing and producing specialised coatings 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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