



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **MEM08014B Apply protective coatings (basic)**

**Release: 1**

## **MEM08014B Apply protective coatings (basic)**

### **Modification History**

Not Applicable

## Unit Descriptor

|                        |                                                                                                                                                   |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Unit descriptor</b> | This unit covers spraying pre-treatments and protective coatings not limited to brush, roller and conventional spray equipment, at a basic level. |
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## Application of the Unit

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Application of the unit</b> | <p>This unit is designed to be used where a basic level of skill is required. It covers single and two-pack coatings not containing isocyanates.</p> <p>Work is undertaken autonomously or as part of a team environment using predetermined standards of safety, quality and operating procedures.</p> <p>Specific health and safety matters include interpretation of MSDS warnings, materials sensitivity, hazardous goods, breathable air and introduction of compressed air into the body.</p> <p>Specific understanding is required of given supplier information and product details. Reference is made to supplier information and specifications as well as accepted and appropriate Australian and international standards.</p> <p>Where isocyanates are present, Unit MEM08015B (Apply protective coatings [advanced]) should be selected.</p> <p>Where required, Unit MEM11004B (Undertake dogging) and Unit MEM11010B (Operate mobile load shifting equipment) should also be selected.</p> <p><b>Band: A</b></p> <p><b>Unit Weight: 4</b></p> |
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## Licensing/Regulatory Information

Not Applicable

## Pre-Requisites

| Prerequisite units |           |                                                     |
|--------------------|-----------|-----------------------------------------------------|
| Path 1             | MEM13003B | Work safely with industrial chemicals and materials |
|                    |           |                                                     |

## Employability Skills Information

|                      |                                          |
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| Employability skills | This unit contains employability skills. |
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## Elements and Performance Criteria Pre-Content

|                                                                   |                                                                                                                                                                                                                                                                                                                  |
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| Elements describe the essential outcomes of a unit of competency. | Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide. |
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## Elements and Performance Criteria

| ELEMENT                                                            | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Determine job requirements                                      | 1.1. Work requirements are determined from job sheet, instructions, drawings or visual inspection.<br>1.2. Required protective coating materials are identified according to job specification.<br>1.3. Required protective coating application equipment is identified according to job requirements.<br>1.4. Work site is prepared for application of protective coating.                                                                                                                                                                                                               |
| 2. Work piece prepared for application of protective coating       | 2.1. Surface condition is inspected for readiness for application of protective coating according to specification.<br>2.2. Unsuitable work pieces/surfaces and fabrication defects are identified and appropriate remedial action or reporting is undertaken in accordance with standard operating procedures.<br>2.3. Components are masked where protective coating application is not specified.<br>2.4. Conditions for overspray are identified.                                                                                                                                     |
| 3. Equipment prepared for application of surface coating materials | 3.1. Required plant and equipment basic operations are understood.<br>3.2. Routine maintenance is undertaken on plant and equipment in accordance with standard operating procedures.<br>3.3. Status/reports are recorded by proforma or orally in accordance with standard operating procedures.<br>3.4. Conventional coating application equipment is assembled in accordance with equipment requirements and standard operating procedures.                                                                                                                                            |
| 4. Apply single pack coatings                                      | 4.1. Coating product type, solvent, uses, mixing procedure, clean-up and safety requirements are identified as appropriate.<br>4.2. Correct method of determining wet film thickness in accordance with specified dry film is demonstrated.<br>4.3. Coating material is thinned to suit the application method and to achieve required film thickness.<br>4.4. Coating is applied using specified application method and standard operating procedures.<br>4.5. Coating schedules can be outlined for metal and non-metal materials.<br>4.6. Coating application and curing technique are |

| ELEMENT                                                    | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                            | monitored according to standard operating procedures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 5. Clean and store equipment                               | <p>5.1. Conventional coating application equipment is cleaned, disassembled and inspected for damage.</p> <p>5.2. Faulty equipment is recorded and reported to appropriate personnel in accordance with standard operating procedures.</p> <p>5.3. Coating application equipment is stored in accordance with standard operating procedures.</p>                                                                                                                                                                             |
| 6. Inspect finish surface                                  | <p>6.1. Surface finish is assessed for profile size differences and uses.</p> <p>6.2. Coating thickness is determined using appropriate instruments and results are compared with job specifications.</p> <p>6.3. Total surface is inspected for conformance to specification in accordance with standard operating procedures.</p> <p>6.4. Inspection results are recorded and reported in accordance with standard operating procedures.</p>                                                                               |
| 7. Select and maintain personal protective equipment (PPE) | <p>7.1. Appropriate personal protective equipment for coating application is selected according to job requirements and standard operating procedures.</p> <p>7.2. Personal protective equipment is used appropriately in accordance with manufacturers' specifications and standard operating procedures.</p> <p>7.3. Ancillary support attachments are identified and used.</p> <p>7.4. Personal protective equipment is maintained in accordance with manufacturers' specification and standard operating procedures.</p> |

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

Look for evidence that confirms skills in:

**REQUIRED SKILLS AND KNOWLEDGE**

- obtaining all relevant drawings, job sheets, specifications and instructions in accordance with workplace procedures
- considering all relevant information and job requirements
- preparing site with due regard to OH&S requirements including site safety, clear working space, other materials/structures/personnel in the vicinity, isolation of work site where required
- undertaking comprehensive inspection and considering specifications during inspection
- using standard workplace procedures to identify, select and apply the appropriate treatment or actions to rectify items with surface or fabrication defects
- identifying surface required as 'no paint areas' and protecting these using standard masking procedures and techniques
- undertaking precautions to prevent overspray in the workplace using standard procedures
- undertaking routine maintenance on plant and equipment in accordance with standard operating procedures
- preparing all required maintenance records/reports and details communicated
- assembling equipment in accordance with manufacturers' specifications and standard operating procedures
- identifying coating type and appropriate solvents and standard workplace procedures required for mixing processes, clean-up and safe handling
- using workplace procedures for determining the wet film thicknesses of a coating from the specified dry film thickness
- calculating required thickness in accordance with product volume solids
- applying standard operating procedures for thinning coating materials and applying the specified film thickness coating to a substrate
- applying protective coating to comply with an established standard using specified methods and standard operating procedures
- controlling coating application and curing techniques using standard operating procedures
- undertaking disassembly, cleaning and checking for functionality of spraying equipment and associated items in accordance with standard operating procedures
- using standard operating procedures to report on any damage or faulty parts and communicating with appropriate personnel
- following procedure for storage including any hazard reduction and/or protection of equipment and components
- checking surface condition of the work piece, including profile size properties and problems according to standard operating procedures and other acceptable standards
- determining thickness using mechanical, electronic or other appropriate instruments and testing results compared with job specifications, drawings etc.
- undertaking comprehensive inspection as required by standard operating procedures

## REQUIRED SKILLS AND KNOWLEDGE

- preparing all required inspection records/reports and details communicated
- selecting personal protective equipment suitable for applying protective coatings
- using appropriate personal protective equipment in workplace operations in accordance with standard procedures
- selecting the appropriate supports to use with personal protective equipment in standard operational practices
- checking personal protective equipment items for serviceability in accordance with manufacturers' specifications
- recording and reporting faulty items to appropriate personnel using standard workplace procedures

### Required knowledge

Look for evidence that confirms knowledge of:

- work to be undertaken and specifications applying to the work
- correct interpretation of all relevant information
- safety issues, adequate precautions, awareness of other site factors that could be affected by the work
- deviation from specified surface finish/condition
- standard workplace procedures for identifying unsuitable work items
- method of locating areas to be protected from coating process and masked
- the areas subject to overspray and requiring protection
- operation of plant and equipment using standard operating procedures
- standard operating procedures for plant and equipment maintenance
- the requirements for completion and processing of maintenance reports
- assembly specifications and procedures
- workplace procedures for identifying coating types and processing solvents, mixing and safe handling practices
- the workplace procedures for determining the wet film thickness of a coating from the specified dry film thickness
- calculations using a specified formulation
- standard operating procedure for thinning coating materials for use in applying the specified film thickness coating to a substrate
- standard operating procedures to apply protective coatings to comply with an established standard
- procedures for controlling coating application and curing techniques
- standard operating procedure for disassembly, cleaning and checking
- standard operating procedures for recording and reporting defective parts
- standard operating procedures for storage and protection of equipment
- standard operating procedures and other relevant standards for assessing the profile of the surface finish
- dry film thickness testing instruments

**REQUIRED SKILLS AND KNOWLEDGE**

- standard operating procedures for surface inspection, including the extent and detail of inspection as required
- requirements for completion and processing of inspection reports
- standard procedure for identifying and selecting the required personal protective equipment
- the workplace standard procedure for the use of personal protective equipment
- the use and selection of appropriate supports to use with personal protective equipment in standard operational practices
- standard procedures and manufacturers' specifications for inspecting and maintaining personal protective equipment in the workplace
- hazard and control measures associated with applying protective coatings (basic) including housekeeping
- safe work practices and procedures

## Evidence Guide

### EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

#### Overview of assessment

A person who demonstrates competency in this unit must be able to apply protective coatings (basic). Competency in this unit cannot be claimed until all prerequisites have been satisfied.

#### Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.

#### Context of and specific resources for assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with applying protective coatings (basic) or other units requiring the exercise of the skills and knowledge covered by this unit.

#### Method of assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

**EVIDENCE GUIDE****Guidance information for assessment****Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

**Personal protective equipment**

Includes hand protection, full body protection, respirators, air fed hoods and foot protection. Noise and heat protection may also be necessary

**Unit Sector(s)****Unit sector****Co-requisite units****Co-requisite units**

## Competency field

|                  |                   |
|------------------|-------------------|
| Competency field | Surface finishing |
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