



Australian Government

Department of Education, Employment and Workplace Relations

MEM08011B Prepare surfaces using solvents and/or mechanical means

Release: 1

MEM08011B Prepare surfaces using solvents and/or mechanical means

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers selecting the appropriate preparation process, selecting and setting up the equipment, undertaking blasting or application of solvents as required, and checking the finished surface.
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Application of the Unit

Application of the unit	This unit applies to surface preparation in new surfaces and in restoration work. Application of surface preparations can apply to metal and non-metal materials. Work is undertaken autonomously or as part of a team environment to established predetermined processes, practices and specifications including environmental requirements. All work and work practices are undertaken to regulatory and legislative requirements. Band: A Unit Weight: 2
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM13003B	Work safely with industrial chemicals and materials
	MEM18001C	Use hand tools
	MEM18002B	Use power tools/hand held operations

Employability Skills Information

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

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. Surface preparation requirements are determined from job sheet, instructions or other predetermined specifications in accordance with standard operating procedures. 1.2. Where required, appropriate solvent and solvent application are selected to meet job specification. 1.3. Where required, appropriate mechanical equipment is selected to meet job specification. 1.4. Work site is prepared for surface cleaning activities.
2. Set up equipment	2.1. Appropriate equipment and any required consumables are assembled, set up and prepared correctly and safely in accordance with manufactures' specifications and standard operating procedures.
3. Prepare surfaces using solvents as required	3.1. Safe working environment for solvent use is established according to regulatory requirements and standard operating procedures. 3.2. Solvents are applied correctly. 3.3. Treated surface is neutralised and made safe to handle.
4. Prepare surfaces using mechanical means as required	4.1. Safe working environment for mechanical surface preparation is established according to regulatory requirements and standard operating procedures. 4.2. Surfaces are prepared using mechanical means. 4.3. Mechanical equipment is cleaned and checked for damage and operational faults, in accordance with standard operating procedures. 4.4. Equipment faults are recorded and reported in accordance with standard operating procedures.
5. Inspect prepared surface	5.1. Surface preparation is checked for cleanliness and conformance to specifications. 5.2. Faults or defects are rectified where required and recorded/reported in accordance with standard operating procedures.

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:

- planning and sequencing operations
- preparing surfaces using solvents as required
- preparing surfaces using mechanical means
- setting up equipment and consumables
- meeting all safety requirements
- using solvents correctly
- neutralising solvents
- using mechanical equipment to prepare surface
- maintaining mechanical equipment
- recording and reporting of faults
- inspecting prepared surface
- rectifying work performed
- checking for conformance to specifications
- reading and interpreting routine information on written job instructions, specifications and standard operating procedures
- following oral instructions
- applying measurement skills needed to meet the requirements of this unit
- entering routine and familiar information onto proformas and standard workplace forms

Required knowledge

Look for evidence that confirms knowledge of:

- common surface contaminants, conditions
- reasons for selecting solvents
- mechanical equipment required
- procedure for setting up equipment
- specifications applying to the surface to be prepared
- methods for neutralising solvents
- tools, equipment, abrasives and other materials
- procedures for maintaining/storing mechanical equipment
- procedures for recording/reporting faulty equipment
- procedures checking prepared surfaces
- rectification techniques
- use and application of personal protective equipment
- safe work practices and procedures

REQUIRED SKILLS AND KNOWLEDGE

- relevant hazards and control measures related to the competency

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 select the appropriate preparation process, select and set up the equipment, undertake mechanical preparation or application of solvents as required and inspect the finished surface. 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 surface preparation using solvents and/or mechanical means, 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,

EVIDENCE GUIDE	
	product and manufacturing specifications, codes, standards, manuals and reference materials.
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.	
Surface preparation	New surfaces and restoration work
Solvents	A range of cleaning chemicals including acids, chlorinated solvents and hydrocarbons
Solvent application methods	Spraying, wiping, brushing, vapour degreasing etc.
Mechanical equipment	Linishers, grinders, polishers, sanders, blast device, enclosures, air grinders etc.
Consumables	Emery cloth/belts, grinding/sanding disks, grinding accessories etc.

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Surface finishing
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