



**Australian Government**

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

# **LMFFF3009B Set up, operate and maintain CNC coating systems**

**Revision Number: 1**

## LMFFF3009B Set up, operate and maintain CNC coating systems

### Modification History

Not applicable.

### Unit Descriptor

<b>Unit descriptor</b>	This unit covers the competency to set up, operate and maintain CNC coating systems in order to apply coatings to specifications
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### Application of the Unit

<b>Application of the unit</b>	
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### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

<b>Prerequisite units</b>	Nil	

### Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>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.</p>
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1.Characteristics of the surface and the required surface coating are identified from work orders or instructions 1.2.Processing and application techniques, time and safety requirements are identified and used for work planning 1.3.OHS requirements, including ventilation requirements and personal protection needs, are observed throughout the work 1.4.Tools, equipment and accessories are identified and checked for safe and effective operation for the surface coating task 1.5.Coating materials are identified and prepared
2. Check and prepare for spraying	2.1.Products with surface or other faults are identified and faults reported or repaired as appropriate 2.2.Other products and equipment in the workplace are protected from overspray 2.3.Trial applications of surface materials are made to check equipment operation, materials consistency and specified surface finish 2.4.Machine faults are identified and rectified or reported 2.5.Material faults are identified and workplace procedures for rectification are followed
3. Apply surface coating	3.1.Surfaces are kept free of contamination 3.2.Surface coatings are applied according to workplace procedures 3.3.Surface coating viscosity and coverage is monitored and checked against workplace requirements for even spread and thickness 3.4.Rectification of surface faults are made as required 3.5.Products are inspected and approved for suitability for further processing 3.6.Defects are dealt with and/or reported in accordance with workplace procedures
4. Clean work area and maintain equipment	4.1.Equipment is cleaned and inspected for serviceable condition and stored appropriately 4.2.Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed 4.3.Work area, including spray booth is cleaned and

ELEMENT	PERFORMANCE CRITERIA
	<p>returned to approved condition</p> <p>4.4. Workplace records are completed</p>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

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

#### Required skills

- collect, organise and understand information related to coating system, coating materials, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate paint requirements and other material requirements
- use pre-checking and inspection techniques to anticipate coating problems, avoid reworking and avoid wastage
- use the workplace technology related to CNC coating systems, including machines, tools, equipment and measuring devices

#### Required knowledge

- identification of CNC coating system equipment, processes and procedures
- characteristics of the coatings and base materials in terms of toxicity, reactivity, flammability, required viscosity and re-coatability
- effects of the fumes, heat and other radiations on surface coatings
- the methods to prevent contamination of surfaces during and after surface coating
- workflow in relation to spraying operations

## 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.

#### Critical Aspects of Evidence

- Locate, interpret and apply information relevant to the materials being applied and the application equipment
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
  - minimise the risk of injury to self and others
  - prevent damage to goods, equipment and products
  - maintain required production output and product quality
- Select and apply surface coatings, including the adjustment of system controls to effect required coating using a minimum of two different CNC systems
- Maintain equipment and work area, including spray booth
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

#### Resource Implications

CNC coating systems and equipment, spray booth, coatings and cleaning products.

#### Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with assessment of other relevant units of competency.

#### Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

## 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.

<b>Unit context</b>	<ul style="list-style-type: none"> <li>• OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures</li> <li>• Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements</li> <li>• Work requires individuals to demonstrate organisational abilities, judgement and problem solving skills in the application of surface coatings</li> </ul>
<b>Surface coating operations</b>	<ul style="list-style-type: none"> <li>• This unit covers work involved in the application of surface coatings by CNC coating systems</li> <li>• Surface coatings are to include: a minimum of two of those required for curtain coating, UV coating, tumbling, dipping and electrostatic powder coating tasks</li> </ul>
<b>Tools and equipment may include:</b>	<ul style="list-style-type: none"> <li>• computerised spray system</li> <li>• electrostatic spray guns</li> <li>• baking ovens</li> <li>• barrel tumblers</li> <li>• spray booths</li> <li>• liquid containers</li> <li>• compressor and hoses</li> <li>• screwdrivers</li> <li>• shifting spanner and spanners</li> <li>• ford cup</li> </ul>
<b>Materials to be applied may include but are not limited to:</b>	<ul style="list-style-type: none"> <li>• stains</li> <li>• lacquers</li> <li>• wax</li> <li>• oil</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• two-pack polyurethane</li> <li>• three-pack polyester</li> <li>• enamels</li> <li>• acrylics</li> <li>• powder coating</li> </ul>
<b>Personal protective equipment includes:</b>	<ul style="list-style-type: none"> <li>• that prescribed under legislation, regulations and enterprise policies and practices</li> </ul>
<b>Information and procedures</b>	<ul style="list-style-type: none"> <li>• Workplace procedures relating to the use and operation of tools and equipment</li> <li>• Workplace instructions, including job sheets, plans, drawings and designs</li> <li>• Workplace procedures relating to reporting and communications</li> <li>• Manufacturer instructions for the use of equipment and materials</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Furniture Finishing
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### Competency field

<b>Competency field</b>	
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### Co-requisite units

<b>Co-requisite units</b>	