



Australian Government

MSFFF3009 Set up, operate and maintain computer numerically controlled (CNC) coating systems

Release: 1

MSFFF3009 Set up, operate and maintain computer numerically controlled (CNC) coating systems

Modification History

Release 1 - New unit of competency

Application

This unit of competency covers setting up, operating and maintaining CNC coating systems in order to apply coatings to specifications.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Competency Field

Unit Sector

Furniture finishing

Elements and Performance Criteria

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
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	Work health and safety (WHS) 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

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| | | 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 returned to approved condition |
| | | 4.4 | Workplace records are completed |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency. Detail on appropriate performance levels for each furnishing unit of competency in reading, writing, oral communication and numeracy utilising the Australian Core Skills Framework (ACSF) are provided in the Furnishing Training Package Implementation Guide.

Range of Conditions

Specifies 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. Range is restricted to essential operating conditions and any other variables essential to the work environment.

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| Unit context includes: | <ul style="list-style-type: none">• WHS requirements, including legislation, building codes, material safety management systems, hazardous and dangerous goods codes, and local safe operating procedures or equivalent• work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements• work requires individuals to demonstrate organisational abilities, judgement and problem solving in the application of surface coatings |
| Surface coatings include: | <ul style="list-style-type: none">• curtain coating• UV coating• tumbling• dipping• electrostatic powder coating |
| Tools and equipment include: | <ul style="list-style-type: none">• computerised spray system• electrostatic spray guns• baking ovens• barrel tumblers• spray booths• liquid containers• compressor and hoses• screwdrivers• shifting spanner and spanners• ford cup |
| Materials to be applied include: | <ul style="list-style-type: none">• stains• lacquers• wax |

Personal protective equipment includes:

- oil
- two-pack polyurethane
- three-pack polyester
- enamels
- acrylics
- powder coating
- that prescribed under legislation, regulations and enterprise policies and practices

Information and procedures include:

- workplace procedures relating to the use of tools and equipment
- work instructions, including job sheets, cutting lists, plans, drawings and designs
- workplace procedures relating to reporting and communication
- manufacturer specifications and operational procedures

Unit Mapping Information

Supersedes and is equivalent to LMFFF3009B Set up, operate and maintain CNC coating systems

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>

Assessment Requirements for MSFFF3009 Set up, operate and maintain computer numerically controlled (CNC) coating systems

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Performance Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or 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 (2) different CNC systems for curtain coating, UV coating, tumbling, dipping, and electrostatic powder coating tasks
- Maintain equipment and work area, including spray booth
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- Communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems, interpret basic plans and follow safety procedures
- Minimise wastage of resources, including materials, time and money
- Work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity

Knowledge Evidence

- Identification of CNC coating system equipment, processes and procedures
- Characteristics of coatings and base materials in terms of toxicity, reactivity, flammability, required viscosity and recoatability
- Effects of fumes, heat and other radiations on surface coatings
- Methods to prevent contamination of surfaces during and after surface coating
- Work flow in relation to spraying operations

Assessment Conditions

- Assessors must:
 - hold training and assessment competencies as determined by the National Skills Standards Council (NSSC) or its successors

- have vocational competency in the furnishing industry at least to the level being assessed with broad industry knowledge and experience, usually combined with a relevant industry qualification
- be familiar with the current skills and knowledge used and have relevant, current experience in the furnishing industry.
- Assessment methods must confirm consistency of performance over time rather than a single assessment event and in a range of workplace relevant contexts.
- Assessment must be by observation of relevant tasks with questioning on underpinning knowledge and, where applicable, multimedia evidence, supervisor's reports, projects and work samples.
- Assessment is to be conducted on single units of competency or in conjunction with other related units of competency. Foundation skills are integral to competent performance in the unit and should not be assessed separately.
- Assessment must occur on the job or in a workplace simulated facility with relevant process, equipment, materials, work instructions and deadlines.
- Access is required to CNC coating systems and equipment, spray booth, coatings and cleaning products.

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