



**Australian Government**

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

# **LMFSL3007A Paint and fire glass**

**Release: 1**

## **LMFSL3007A Paint and fire glass**

### **Modification History**

New unit incorporating LMFSL3002A and LMFSL3003A. Not equivalent.

### **Unit Descriptor**

This unit of competency covers the skills and knowledge required to apply patterns and/or designs to glass with vitreous paints to achieve specific outcomes through the firing of glass.

### **Application of the Unit**

This unit supports the attainment of skills and knowledge required for competent workplace performance in leadlight and stained glass operations. The requirement to paint and fire glass applies to a workshop environment and involves application of skills and knowledge at a tradesperson level. These skills and knowledge are to be used within the scope of the individual's job and authority.

### **Licensing/Regulatory Information**

Not applicable.

### **Pre-Requisites**

Not applicable.

### **Employability Skills Information**

This unit contains employability skills.

### **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.

## Elements and Performance Criteria

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|---|---|-----|--|
| 1 | Identify painting and firing requirements | 1.1 | Applicable <i>occupational health and safety (OHS)</i> , <i>legislative</i> and <i>organisational requirements</i> relevant to leadlight and stained glass operations are verified and complied with |
|   |   | 1.2 | Types and quantities of <i>patterns</i> , <i>designs</i> and <i>materials</i> required are identified from plans or work instructions  |
|   |   | 1.3 | The processes for painting patterns and designs onto glass and achieving <i>specific outcomes</i> through the firing of glass are identified   |
| 2 | Prepare to paint and fire glass           | 2.1 | Painting sequence is determined in a logical order to suit the job   |
|   |   | 2.2 | <i>Tools</i> , <i>equipment</i> and materials are selected and checked prior to use to ensure they are appropriate for painting and firing, serviceable and in a safe condition                      |
|   |   | 2.3 | Patterns and design templates are checked against specifications or job order  |
|   |   | 2.4 | Paint colours are matched against the plan or work order and glass <i>prepared</i> for painting  |
| 3 | Apply vitreous paint                      | 3.1 | Paint is applied to the glass surface in accordance with the pattern or design template  |
|   |   | 3.2 | Any problems occurring during the painting operation are identified and rectified  |
| 4 | Conduct firing operations                 | 4.1 | Firing sequence is determined in a logical order to suit the job   |
|   |   | 4.2 | Kiln is checked prior to use to ensure it is appropriate for the firing, serviceable and in a safe condition   |
|   |   | 4.3 | Kiln components and controls, including emergency stops and guards, are identified and checked for correct operation   |
|   |   | 4.4 | Glass is prepared for firing and kiln equipment is operated, <b>adjusted</b> and monitored to ensure correct   |

- product quality and output
- 4.5 Any problems occurring during the firing operation are identified and rectified
- 5 Finalise the installation
- 5.1 Painted and fired glass is inspected for quality of work and repaired or discarded, as required
  - 5.2 Waste and scrap material is removed for disposal or recycling, as required
  - 5.3 Work area is cleaned and rubbish disposed of, as appropriate
  - 5.4 Tools, equipment and unused materials are cleaned and removed and stored appropriately
  - 5.5 Workplace *records* are maintained

## Required Skills and Knowledge

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

### Required skills include:

- collecting, organising and understanding materials, technology and information related to the painting and firing of glass
- using communication skills to the level required to confirm work requirements and specifications; communicate effectively regarding work requirements with supervisors, other workers and customers; report work outcomes and problems; and relate to people from a range of social, cultural and ethnic backgrounds, and of varying physical and mental abilities
- using literacy skills to the level required to understand information related to work orders, including common industry terminology, plans and safety procedures; prepare reports; and interpret technical information and specifications
- maintaining quality records related to the painting and firing of glass
- working with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- identifying, anticipating and responding to faults in leadlight and stained glass components
- recognising and responding to circumstances outside instructions or personal competence
- planning and organising activities, including the preparation and layout of own worksite, and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- using mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate work and material requirements
- clarifying and confirming work instructions
- planning own work within the given task parameters
- accepting responsibility for given tasks
- setting, monitoring and satisfying personal work goals
- maintaining current knowledge of tools and materials
- maintaining current knowledge of leadlight and stained glass components
- seeking learning opportunities
- using the workplace technology related to the painting and firing of glass, including computers, measuring devices, kilns and recording systems

### Required knowledge includes:

- state or territory OHS legislation, regulations, standards, codes of practice, organisational and site standards, requirements, policies and procedures relevant to the painting and firing of glass for leadlight and stained glass operations

- glass painting and firing terminology and techniques
- types of glass and other materials used in the leadlight and stained glass industry, their characteristics, properties, uses and limitations
- types of vitreous paints, their characteristics, properties, uses and limitations
- operation of glass firing kiln
- characteristics and properties of glass when heat is applied
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

## 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	Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Assessors must be satisfied that the candidate can competently and consistently:</p> <ul style="list-style-type: none"> <li>• read and interpret work/job specifications</li> <li>• identify a range of glass suitable for painting and firing, detailing their uses and limitations</li> <li>• identify and explain the properties and limitations of vitreous paints</li> <li>• identify and explain the properties and limitations of glass when heat is applied</li> <li>• identify the likely impact of various environmental effects on painted and fired glass</li> <li>• paint glass using freehand and template processes</li> <li>• fire glass to achieve required outcomes</li> <li>• comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the painting of glass with vitreous paints and firing glass to meet specified outcomes</li> <li>• communicate effectively and work safely with others in the work area.</li> </ul>
Context of, and specific resources for assessment	<p>The application of competency is to be assessed in the workplace or realistically simulated workplace.</p> <p>Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints.</p> <p>Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context.</p> <p>Assessment is to comply with relevant regulatory or Australian Standard requirements.</p> <p>The following resources should be made available:</p> <ul style="list-style-type: none"> <li>• workplace location or simulated workplace</li> <li>• materials and equipment relevant to painting glass with vitreous paints</li> </ul>

	<ul style="list-style-type: none"> <li>• specifications and work instructions.</li> </ul>
Method of assessment	<p>Assessment must satisfy the endorsed Assessment Guidelines of the LMF02 Furnishing Industry Training Package.</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge.</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application.</p> <p>Assessment may be applied under project-related conditions (real or simulated) and require evidence of process.</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.</p> <p>Assessment may be in conjunction with assessment of other units of competency.</p>
Guidance information for assessment	

## 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.

OHS requirements are to be in accordance with:	<ul style="list-style-type: none"> <li>• Commonwealth, state or territory legislation and regulations, organisational safety policies and procedures. Requirements may include, but are not limited to: <ul style="list-style-type: none"> <li>• the use of personal protective equipment and clothing</li> <li>• fire fighting equipment</li> <li>• first aid equipment</li> <li>• hazard and risk control and elimination of hazardous materials and substances</li> </ul> </li> </ul>
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	<ul style="list-style-type: none"> <li>• manual handling, including lifting and carrying</li> </ul>
Legislative requirements are to be in accordance with:	<ul style="list-style-type: none"> <li>• applicable legislation from all levels of government that affect organisational operation. Requirements may include, but are not limited to: <ul style="list-style-type: none"> <li>• award and enterprise agreements</li> <li>• industrial relations</li> <li>• Australian Standards</li> <li>• confidentiality and privacy</li> <li>• OHS requirements</li> <li>• the environment</li> <li>• equal opportunity</li> <li>• anti-discrimination</li> <li>• relevant industry codes of practice</li> <li>• duty of care and heritage</li> </ul> </li> </ul>
Organisational requirements may include, but are not limited to:	<ul style="list-style-type: none"> <li>• legal, organisational and site guidelines, policies and procedures relating to own role and responsibility</li> <li>• quality assurance</li> <li>• procedural manuals</li> <li>• quality and continuous improvement processes and standards</li> <li>• OHS procedures</li> <li>• emergency and evacuation</li> <li>• ethical standards</li> <li>• recording and reporting</li> <li>• access and equity principles and practices</li> <li>• equipment use, maintenance and storage</li> <li>• environmental management (waste disposal, recycling and reuse guidelines)</li> </ul>
Patterns and designs may include:	<ul style="list-style-type: none"> <li>• freehand or computer drawn templates</li> <li>• artwork to be transferred to glass</li> <li>• designs to be transferred to glass</li> <li>• other patterns</li> </ul>
Materials may include, but are not limited to:	<ul style="list-style-type: none"> <li>• clear, coloured or painted glass</li> <li>• vitreous paints</li> <li>• bedding sand</li> <li>• marking and masking materials</li> </ul>
Specific outcomes may include:	<ul style="list-style-type: none"> <li>• glass <b>painting</b>, staining and forming</li> </ul>
Tools and equipment may include:	<ul style="list-style-type: none"> <li>• work benches</li> <li>• light tables</li> <li>• paint brushes and other applicators</li> </ul>

	<ul style="list-style-type: none"><li>• general hand tools</li><li>• firing kiln</li></ul>
Preparation may include:	<ul style="list-style-type: none"><li>• cleaning</li><li>• marking</li><li>• masking</li><li>• applying templates</li></ul>
Records may include, but are not limited to:	<ul style="list-style-type: none"><li>• the product type</li><li>• size</li><li>• inspection</li><li>• inspection outcomes</li><li>• quality outcomes</li><li>• storage locations</li></ul>

## Unit Sector(s)

Leadlight and stained glass

## Custom Content Section

Not applicable.