



Australian Government

MSFSL3004 Prepare and install architectural engineered leadlight and stained glass

Release: 1

MSFSL3004 Prepare and install architectural engineered leadlight and stained glass

Modification History

Release 1 - New unit of competency

Application

This unit of competency covers preparing and installing leadlight and stained glass in structural and other architecturally engineered applications.

Licensing, legislative or certification requirements may apply to this unit and relevant state/territory and local government agencies should be consulted to determine any necessary certification or licensing for undertaking glass and glazing work. Access to construction sites requires certification of general induction training specified by the *National Code of Practice for Induction for Construction Work (ASCC 2007)*.

Pre-requisite Unit

Competency Field

Unit Sector

Leadlight and Stained Glass

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Identify work requirements	1.1	Applicable work health and safety (WHS), legislative and organisational requirements relevant to leadlight and stained glass operations are verified and complied with
		1.2	Work requirements in the form of type of leadlight and stained glass, frames and the method of fixing are identified, confirmed and clarified with appropriate personnel
		1.3	The process for preparing and installing architecturally engineered leadlight and stained glass is identified
2	Prepare for installation	2.1	Work sequence is determined in a logical order to suit the job

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| | 2.2 | Tools, equipment and materials are selected and checked prior to use to ensure they are appropriate for the work, serviceable and in a safe condition |
| | 2.3 | Components of the leadlight and stained glass are checked against specifications or job order |
| | 2.4 | Leadlight and stained glass fixing method is selected |
| | 2.5 | Frame or opening is prepared to receive leadlight and stained glass |
| | 2.6 | Fixing and sealing materials are prepared by mixing or cutting to length, as appropriate |
| 3 | Identify site conditions and constraints | |
| | 3.1 | Site safety hazards are recognised and corrective action taken to reduce risk of injury to self and others |
| | 3.2 | On-site difficulties are identified and addressed in accordance with regulations and enterprise agreements |
| | 3.3 | Special characteristics of the leadlight and stained glass aperture are identified in relation to the effect of the fitting process on the finished job |
| | 3.4 | Covering material is applied, where necessary, to protect existing fixtures and fittings |
| 4 | Fit leadlight and stained glass | |
| | 4.1 | Leadlight and stained glass is fixed to the frame or opening using the selected method |
| | 4.2 | Solvents and sealants are applied |
| | 4.3 | Leadlight and stained glass and/or frame are cleaned after fixing |
| 5 | Finalise the installation | |
| | 5.1 | Completed installation is checked to ensure compliance |
| | 5.2 | Waste and scrap material are 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, removed and stored appropriately |
| | 5.5 | Workplace records are maintained according to workplace |

procedures

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.

Unit context includes:

- 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 some discretion, judgement and problem solving

Appropriate personnel include:

- architects
- engineers
- supervisors
- suppliers
- clients
- colleagues
- managers

Architecturally engineered leadlight and stained glass includes:

- curtain walls
- infill and structural balustrade
- suspended and overhead glass
- toughened glass assemblies
- aluminium systems, including planar assemblies
- curtain wall systems
- spider assemblies
- panel wall systems (hung and stacked)

Tools and equipment include:	• watertight glazing techniques, including the use of silicone • assembly benches • drop and up-cut saws • pneumatic, hydraulic and manual presses • lifting equipment • frame tooling • copy routers • end millers • crimpers • electric and pneumatic powered drills and screwdrivers • pop rivet guns • glue guns • general hand tools
Materials include:	• leadlight or stained glass panels • annealed glass • safety glass • patterned glass • tinted • heat-reflective • insulated glass units • steel • fasteners • plastics • sealants • tapes • vinyls • gaskets • timber reveals • flashings
Fixing method includes:	• consideration of the technical specification, type of glass and frame, security requirements, sealing methods and relevant Australian Standards
Preparation include:	• cleaning • surface preparation, if required • checking size against specification
Records include:	• the product type • size • inspection • inspection outcomes • quality outcomes • storage locations

Personal protective equipment includes:

- that prescribed under legislation, regulation and enterprise policies and practices:
 - gauntlets
 - gloves
 - safety glasses
 - hard hats
 - safety footwear
 - aprons and overalls

Information and procedures include:

- workplace procedures relating to the use of tools and equipment and personal protective 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 LMFSL3006B Prepare and install architectural engineered leadlight and stained glass.

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 MSFSL3004 Prepare and install architectural engineered leadlight and stained glass

Modification History

Release 1 - New unit of competency

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
- Identify structural leadlight and stained glass, their properties, uses and limitations
- Assess the likely impact of various environmental effects on architectural leadlight and stained glass
- Prepare and install at least one architecturally engineered leadlight and stained glass component that can be a curtain wall/panel, suspended panel or a balustrade
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for structural leadlight and stained glass
- 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
- Avoid backtracking, work flow interruptions or wastage
- Work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity

Knowledge Evidence

- State or territory WHS legislation, regulations, standards and codes of practice relevant to the full range of processes for leadlight and stained glass operations
- Architectural leadlight and stained glass construction terminology and techniques
- Organisational and site standards, requirements, policies and procedures for preparation and installation of architectural leadlight and stained glass
- Types of glass and other materials used in the leadlight and stained glass industry, their characteristics, properties, uses and limitations
- Environmental protection requirements relating to the disposal of waste material
- Established communication channels and protocols

- Relevant 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

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 a location, materials, equipment and specifications relevant to installing structural leadlight and stained glass.

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