



Australian Government

Department of Education, Employment and Workplace Relations

LMFGG3018C Prepare and install architectural engineered glazing

Release: 1

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Modification History

Updated format, revised Evidence Guide. Outcome equivalent.

Unit Descriptor

This unit of competency covers the skills and knowledge required to prepare and install glass in structural and other architectural engineered applications.

Application of the Unit

This unit requires individuals to demonstrate discretion, judgement and problem solving in the planning and fitting of glass in structural and other architectural engineered applications. The work is generally performed in a team environment, with general supervision, and may be part of a production process.

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 work requirements | 1.1 | Work requirements in the form of <i>type of glass</i> , frames and the <i>method of fixing</i> are identified from work instructions |
| | | 1.2 | Occupational health and safety (OHS) requirements for fabrication and installation of architectural engineered glazing, including <i>personal protective equipment</i> , are identified and observed throughout the work |
| | | 1.3 | The process for <i>fabricating and installing</i> architectural engineered glazing is identified |
| 2 | Prepare for work | 2.1 | Work sequence is planned in a logical order to suit the job and <i>workplace procedures</i> |
| | | 2.2 | <i>Tools, equipment</i> and <i>materials</i> , other than glass, acrylic glazing products and frames, are selected and checked prior to use to ensure they are appropriate for the work, serviceable and in a safe condition |
| | | 2.3 | Type of glass and/or acrylic glazing products to be fitted and frames are selected to match the customer order, requirements for security, noise or light control and relevant Australian Standards |
| | | 2.4 | Glass is checked for type, size and imperfections and the appropriate glass fixing method selected to meet specifications |
| | | 2.5 | Frame or opening is <i>prepared</i> to receive glass |
| | | 2.6 | Fixing and sealing materials are prepared by mixing or cutting to length, as appropriate |
| 3 | Identify site conditions and restraints | 3.1 | Site safety hazards are recognised and corrective action taken to reduce injury to self and others |
| | | 3.2 | Any on-site difficulties are identified and addressed in accordance with regulations and enterprise agreements |
| | | 3.3 | Special characteristics of the glass aperture are identified in relation to the effect of the glass fitting process on the finished job |

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| | | 3.4 | Covering material is applied, where necessary, to protect existing fixtures and fittings |
| 4 | Fit glass | 4.1 | Glass and/or acrylic glazing product is fixed to the frame or opening using the selected method and in accordance with recognised Australian and industry standards |
| | | 4.2 | Solvents and sealants are used in accordance with manufacturer recommendations and Australian Standards |
| | | 4.3 | Excess sealing material is removed and the glass and frame cleaned after fixing |
| 5 | Inspect final product and clean up work area | 5.1 | Completed installation is checked to ensure compliance with customer requirements, specifications and Australian Standards |
| | | 5.2 | Work area is cleaned and left in a safe condition and rubbish removed from work area and disposed of in accordance with relevant statutory requirements and enterprise requirements |
| | | 5.3 | Tools, equipment and materials are cleaned and stored following workplace procedures |
| | | 5.4 | Waste and scrap material are removed for disposal or recycling, as required |
| | | 5.5 | Workplace documentation is completed in accordance with workplace requirements |

Required Skills and Knowledge

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

Required skills include:

- collecting, organising and understanding information related to work orders, basic plans and safety procedures
- 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
- planning and organising activities, including the preparation and layout of the work area, and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- working with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- using mathematical ideas and techniques to correctly complete measurements, calculate work requirements, and optimise glass sizes for economical cutting and assembling of required materials
- using pre-checking and inspection techniques to plan work, and avoid re-working and wastage
- using workplace technology related to the preparation and installation of structural glazing
- modifying activities to cater for variations in workplace contexts and environment

Required knowledge includes:

- types, qualities and characteristics of glass and acrylic glazing products, including hazards and handling requirements
- techniques, methods, materials and process of preparing and installing structural glazing
- relevant Australian Standards
- workflow requirements in relation to the preparation and installation of structural glazing
- the correct application and operation of tools and equipment used
- identification of equipment, processes and procedures
- workplace safety system requirements related to the preparation and installation of structural glazing

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	Assessors must be satisfied that the candidate can competently and consistently: • interpret work order/job instruction and locate and apply relevant information to fabricate and install structural glazing • 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 • as a minimum: • measure glass for curtain walls, balustrades, suspended and/or overhead glazing • select glass to comply with AS 1288:2006 Glass in buildings - Selection and installation • cut and process glass in accordance with AS/NZS 4667:2000 Quality requirements for cut-to-size and processed glass • identify and erect appropriate ladders and scaffolding to comply with the relevant regulations and standards • identify and apply glazing, structural sealants and tapes • install glazing materials and weatherproofing • calculate the cost of glass and labour • work effectively with others.
Context of and specific resources for assessment	The application of competency is to be assessed in the workplace or realistically simulated workplace. Assessment is to occur under standard and authorised

	work practices, safety requirements and environmental constraints. Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context. Assessment is to comply with relevant regulatory or Australian Standard requirements. The following resources should be made available: • frames • glass and acrylic glazing products • fixing material • sealants • workplace operating procedures and work orders • personal protective equipment • an appropriate work area/site.
Method of assessment	Assessment must satisfy the endorsed Assessment Guidelines of the LMF02 Furnishing Industry Training Package. 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. Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and application. Assessment may be applied under project-related conditions (real or simulated) and require evidence of process. 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. Assessment may be in conjunction with assessment of other units of competency.
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.

<i>Types of glass may include, but are not limited to:</i>	• annealed glass • toughened glass • laminated glass • wired glass • bandit resistant glass • bullet resistant glass • heat reflective glass • solar controlled glass and spandrel panels
<i>Methods of fixing depend upon:</i>	• the specification • type of glass and frame • security requirements • sealing methods • relevant Australian Standards • glazing methods: • beaded • pocket • flush • channel glazing and structural glazing
<i>Personal protective equipment includes:</i>	• that prescribed under legislation, regulation and enterprise policies and practices, and may include: • gauntlets • gloves • safety glasses • hard hats • safety footwear • aprons and overalls
<i>Fabricating and installing may include:</i>	• aluminium glazing systems, including planar assemblies, curtain wall systems, spider assemblies and panel wall systems (hung and stacked) • identifying and erecting appropriate ladders and scaffolding
<i>Workplace procedures include:</i>	• workplace procedures relating to fitting of glass for structural applications • on-site procedures and regulations relating to the handling and movement of glass • equipment manufacturer specifications and

	operational procedures • work instructions, including job sheets, plans, drawings and designs • safety standards, including personal protective equipment, OHS regulations and enterprise requirements • Australian Standards: • AS 1288:2006 Glass in buildings - Selection and installation • AS/NZS 2208:1996 Safety glazing materials in buildings • AS/NZS 4667:2000 Quality requirements for cut-to-size and processed glass • AS 4285:2007 Skylights • AS/NZS 4666:2000 Insulating glass units
<i>Tools and equipment may include:</i>	• general cutting and glazing tools • electric and pneumatic portable power tools • saws • drills and portable compressors
<i>Materials may include, but are not limited to:</i>	• all forms of flat glass and acrylic glazing products • plastic • aluminium • steel • solid timber • gaskets • sealants and adhesives
<i>Preparation includes:</i>	• cleaning • surface preparation (if required) • checking size against specification

Unit Sector(s)

Glass and glazing

Custom Content Section

Not applicable.