



Australian Government

MSFGG3018 Prepare and install architectural engineered glazing

Release: 2

MSFGG3018 Prepare and install architectural engineered glazing

Modification History

Release 2 - Update of Australian Standards codes. Statement regarding currency of Australian Standards included in Range of Conditions and Performance Evidence.

Release 1 - New unit of competency

Application

This unit of competency covers preparing and installing glass in structural and other architectural 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

Glass and Glazing

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	Work requirements in the form of type of glass, frames and the method of fixing are identified from work instructions
		1.2	Work health and safety (WHS) requirements for fabrication and installation of architectural engineered glazing, including personal protective equipment, are identified and observed throughout the work
		1.3	The process for fabricating and installing architectural engineered glazing is identified
2	Prepare for work	2.1	Work sequence is planned in a logical order to suit the job

- and workplace procedures
- 2.2 Tools, equipment and materials, 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 Ladders and scaffolding to comply with the relevant regulations and standards are identified and erected, where required, for the installation
 - 2.6 Frame or opening is prepared to receive glass
 - 2.7 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 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
 - 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
- 5.1 Completed installation is checked to ensure compliance

and clean up work area

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 Any ladders or scaffolding used in the installation are disassembled and removed
- 5.4 Tools, equipment and materials are cleaned and stored following workplace procedures
- 5.5 Waste and scrap material are removed for disposal or recycling, as required
- 5.6 Workplace documentation is completed in accordance with workplace requirements, including calculating the cost of glass, fittings, materials and labour

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
Types of glass include:	• annealed glass • toughened glass • laminated glass • wired glass • bandit-resistant glass • bullet-resistant glass • heat-reflective glass • solar controlled glass • spandrel panels
Methods of fixing include:	• consideration of the specification • type of glass and frame • security requirements • sealing methods • relevant Australian Standards • glazing methods: • beaded • pocket • flush • channel glazing • structural glazing
Fabricating and installing include:	• 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
Tools and equipment include:	• general cutting and glazing tools • electric and pneumatic portable power tools • saws • drills • portable compressors
Materials include:	• all forms of flat glass and acrylic glazing products • plastic • aluminium • steel • solid timber • gaskets • sealants • adhesives
Preparation includes:	• cleaning • surface preparation (if required) • checking size against specification

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
- 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 4666:2012 Insulating glass units

Note, wherever Australia Standards are listed they apply at the time of publication, but the most current version (including amendments) or replacement versions are to be used.

Unit Mapping Information

Supersedes and is equivalent to LMFGG3018C Prepare and install architectural engineered glazing.

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 MSFGG3018 Prepare and install architectural engineered glazing

Modification History

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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
- 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, and cut and process glass in accordance with AS/NZS 4667:2000 Quality requirements for cut-to-size and processed glass
 - *Note, wherever Australia Standards are listed they apply at the time of publication, but the most current version (including amendments) or replacement versions are to be used.*
- Identify and erect appropriate ladders and scaffolding to comply with the relevant regulations and standards
- Identify and apply glazing, structural sealants and tapes, and install glazing materials and weatherproofing
- Calculate the cost of glass, fittings, materials and labour
- 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

- 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
- Work flow requirements in relation to the preparation and installation of structural glazing
- 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

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 frames, glass and acrylic glazing products, fixing material, sealants, workplace operating procedures and work orders, personal protective equipment and an appropriate work area/site.

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