



Australian Government

Department of Education, Employment and Workplace Relations

LMFGG3019C Conduct commercial and structural re-glazing

Release: 1

LMFGG3019C Conduct commercial and structural re-glazing

Modification History

Updated format, title changed from previous 'Conduct commercial and structural glazing', revised Evidence Guide. Outcome equivalent.

Unit Descriptor

This unit of competency covers the skills and knowledge required to replace glass in commercial, structural and/or architectural engineered applications.

Application of the Unit

This unit requires individuals to demonstrate some discretion, judgement and problem solving in the handling, installation and re-glazing of commercial glass products. The work can be performed individually or 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 <i>fabrication and installation of commercial re-glazing</i> , including <i>personal protective equipment</i> , are identified and observed throughout the work |
| | | 1.3 | The process for fabricating and installing commercial re-glazing is identified |
| 2 | Prepare for work | 2.1 | Work sequence is planned in a logical order to suit the job and <i>workplace requirements</i> |
| | | 2.2 | <i>Tools, equipment</i> and <i>materials</i> , other than glass 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 to be fitted and frames are selected to match the customer order, existing glass type, requirements for security, noise or light control and relevant Australian Standards |
| | | 2.4 | Glass fixing method is selected to meet specifications |
| | | 2.5 | Glass is checked for type, size and imperfections |
| 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 | Other on-site difficulties are recognised and corrective action taken in accordance with regulations and glazing requirements |
| | | 3.3 | Covering material is applied, where necessary, to protect existing fixtures and fittings |
| | | 3.4 | Special characteristics of the window or door which may affect the finished job are identified and corrective action taken |

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| 4 | Prepare frame and materials | 4.1 | Frame condition (if applicable) is assessed to ensure suitability for re-glazing in accordance with customer requirements and Australian Standards |
| | | 4.2 | Defective frames are reported for repair or replacement in accordance with workplace procedures |
| | | 4.3 | Frame is prepared (if required) to receive glass |
| | | 4.4 | Fixing and sealing materials are prepared by mixing or cutting to length, as appropriate |
| | | | |
| 5 | Fit glass | 5.1 | Glass is fixed to the frame using the selected method and in accordance with recognised industry procedures and Australian Standards |
| | | 5.2 | Solvents and sealants are used in accordance with manufacturer recommendations and Australian Standards |
| | | 5.3 | Excess sealing material is removed and glass and frame cleaned after fixing |

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 commercial and structural re-glazing
- modifying activities to cater for variations in workplace contexts and environment

Required knowledge includes:

- types, qualities and characteristics of glass, including hazards and handling requirements
- relevant Australian Standards
- techniques, methods, materials and process of commercial and structural re-glazing
- workflow requirements in relation to fitting glass
- the correct application and operation of tools and equipment used
- identification of equipment, processes and procedures
- types of silicone products and their use
- workplace safety system requirements related to commercial and structural re-glazing
- regulations and standards for safe working at heights and on scaffolding

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 conduct commercial and structural reglazing • 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 glass, frames, equipment and products • maintain required product quality • as a minimum: • safely remove glass from commercial and architectural frames • prepare frame and opening, including clean-up • measure glass for commercial projects, doors, show and/or food cabinets, including sliding tracks, shop fronts and returns, architectural, curtain wall, structural and/or overhead glazing • selecting glass to comply with AS 1288:2006 Glass in buildings - Selection and installation • cutting and processing glass in accordance with AS/NZS 4667:2000 Quality requirements for cut-to-size and processed glass • identify and work at heights and on scaffolding to the relevant regulations and standards • identify and apply glazing, structural sealants and tapes • 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 • 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 • sputter coated and spandral glass
<i>Methods of fixing depend upon:</i>	• the specification • type of glass and frame • security requirements • sealing methods • relevant Australian Standards • glazing methods: • pocket • flush • channel glazing • structural and double glazing
<i>Fabrication and installation of commercial re-glazing may include:</i>	• work involving the on-site installation or replacement of glass for commercial, structural and other architectural engineered applications. This covers: • commercial windows and doors, including: • casement • sash • awning and double hung windows • shopfronts and returns • louvres • hinged, pivot and sliding doors and windows • automatic doors • mirrors • furniture applications • showcases • sliding tracks and food cabinets • curtain walls

	• balustrading • structural and suspended glazing • overhead glazing • toughened glass assemblies • aluminium glazing systems, including planar assemblies, curtain wall systems, spider assemblies, panel wall systems (hung and stacked) • Armour-view balustrading • watertight glazing techniques
<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>Workplace procedures include:</i>	• workplace procedures and regulations relating to handling, movement and fitting of glass for commercial and structural applications • quality and Australian Standards and procedures • equipment and material manufacturer specifications and operational procedures • work instructions, including job sheets, cutting lists, plans, patterns, templates, drawings and/or 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
<i>Tools and equipment may include:</i>	• glass cutters • pliers • hack-out knives • drills • putty knives • tape measures

	• scaffolding • ladders
Materials may include, but are not limited to:	• all forms of flat glass and acrylic glazing products • plastic • aluminium • steel • solid timber • gaskets • sealants and adhesives
Preparation includes:	• removing any remains of glass and sealants • cleaning • surface preparation (if required) • checking size against specification

Unit Sector(s)

Glass and glazing

Custom Content Section

Not applicable.