

Title	Install an Insulated Glass Unit (IGU)		
Level	4	Credits	10

Purpose	<p>A person credited with this standard can:</p> <ul style="list-style-type: none"> • demonstrate knowledge of IGU glazing systems; • explain the installation methods required to meet IGU warranty requirements; • prepare to glaze an IGU; • glaze an IGU; and • complete cleaning and storage requirements.
----------------	--

Classification	Construction Trades > Glazing
-----------------------	-------------------------------

Available grade	Achieved
------------------------	----------

Guidance Information

1 Assessment

This unit standard must be assessed under the supervision of a commercially competent glazing practitioner in workplace conditions that reflect:

- current health, safety, industry, and workplace requirements; and
- industry requirements for commercially acceptable timeframes.

Evidence generated for assessment against this standard must be verified by a person who has current expertise in the glazing trades and has had the opportunity to regularly observe the candidate in the workplace.

2 Range

Glass types may include – annealed, toughened, laminate;
frame types may include – timber, steel, aluminium, UPVC (unplasticized polyvinyl chloride); patent glazing bars, sashes, fixed frames, hinged doors, sliding doors, double-hung sash.

3 Definition

Personal protective equipment includes – anything used or worn by a person (including clothing) to minimise risks to the person's health and safety.

Worksite requirements refer to instructions to staff on policy and procedures which are documented in manual format and are available in the workplace. These requirements include – company specifications and procedures, work instructions, manufacturer's specifications, product quality specifications, legislative requirements.

- 4 Evidence generated for assessment against this standard must reflect the best practice guidelines and principles specified in:
- NZS 4223.1:2008. *Glazing in buildings – Part 1: Code of practice for glazing in buildings - Glass selection and glazing*;
 - NZS 4223.2:2016. *Glazing in buildings – Part 2: Insulating Glass Units*;
 - NZS 4667: 2000 *Quality requirements for cut-to-size and processed glass*;
 - NZS 4666: 2012 *Insulating glass units*.
- AS/NZS and NZS standards are available at <https://www.standards.govt.nz/>.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of IGU glazing systems.

Range bead glazing with butyl tape, bead glazing with foam tape, bead glazing with sealants, combination methods, bead glazing with wedge and pressure bead glazing, steel frame, UPVC frame.

Performance criteria

- 1.1 Identify required sealant and glazing materials combinations.
- 1.2 Describe block types and positioning for different frame applications.
- 1.3 Describe the purpose of drainage system and compliance requirements.

Outcome 2

Explain the installation methods required to meet IGU warranty requirements.

Performance criteria

- 2.1 Explain the installation methods relevant to glazing insulated glass units.

Range installation methods include – drained (blocks, gasket sections, wedges, glazing tapes, glazing tapes with sealant capping); non-drained (glazing tapes with sealant capping), butt joints.
- 2.2 Explain the relevance of warranty obligations.

Range obligations include – preventing moisture attack, compatibility of components, level of solar radiation exposure, system design.

Outcome 3

Prepare to glaze an IGU.

Performance criteria

- 3.1 Select glazing materials according to the glazing method, solar and thermal performance requirements, and job specifications.
- 3.2 Check the glazing unit for faults and remediate.
- 3.3 Check and gather equipment, tools, and glazing materials before work begins.
- 3.4 Check the frame to be glazed.
- Range obstruction free, clean, dry, primed and/or sealed, compatible with glazing material and glazing system, drainage.

Outcome 4

Glaze an IGU.

Performance criteria

- 4.1 Seal the joints to meet the job specifications.
- 4.2 Glaze the insulated glass unit to meet the job specifications.
- Range timber framed – set blocks, apply tape, fit IGU, fit bead, seal perimeter;
aluminium – set blocks, fit IGU, fit bead, seal or wedge where required.
- 4.3 Provide information to the customer about any relevant maintenance requirements.

Outcome 5

Complete cleaning and storage requirements.

Performance criteria

- 5.1 Clean and store tools and plant used to glaze IGU.
- Range plant may include – any machinery, vehicle, equipment (including personal protective equipment) used in a glazing operation.
- 5.2 Clean the IGU, and clear and clean the work area.

Planned review date	31 December 2027
----------------------------	------------------

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	24 November 2022	N/A

Consent and Moderation Requirements (CMR) reference

0048

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Waihanga Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@waihangaararau.nz if you wish to suggest changes to the content of this unit standard.