

Title	Glaze a frame or panel using structural silicone		
Level	4	Credits	5

Purpose	<p>A person credited with this standard can:</p> <ul style="list-style-type: none"> • establish the technical requirements for structural silicone glazing; • clean and prepare a substrate for glazing with structural silicone; • glaze and apply structural silicone to a frame or panel; and • complete cleaning and storage requirements.
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Classification	Construction Trades > Glazing
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Available grade	Achieved
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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 Glazing must be completed without injury to personnel or damage to products and equipment. Personal protective equipment must be used to meet regulatory and worksite requirements.

3 Definitions

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

Substrate refers to the surface, structure or material to which structural silicone adheres.

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 Range

Glazing may include – glass to glass, glass to metal, glass frame, glass panel.

- 5 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 4223.3:2016. *Glazing in buildings – Part 3: Human impact safety requirements*;
 - NZS 4223.4:2008. *Glazing in buildings – Part 4: Wind, dead, snow, and live actions*.
- NZS and AS/NZS standards are available from <http://www.standards.govt.nz/>.

Outcomes and performance criteria

Outcome 1

Establish the technical requirements for structural silicone glazing.

Performance criteria

- 1.1 Describe the requirements for substrate preparation and sealant substrate compatibility.
- 1.2 Establish testing requirements for glass or cladding and substrate compatibility.
- 1.3 Establish the parameters for joint design.
- Range bite size, glue line thickness and joint configuration.
- 1.4 Select the cleaning products and preparation process according to technical requirements of glazing application.
- Range preparation processes – removal of oil, grease, and soluble salts; removal of traces of cleaning agents; protection of surfaces from contamination.
- 1.5 Describe the properties and functions of a range of primer applications used in structural silicone glazing installations.
- 1.6 Describe methods used for sealant application for glazing with structural silicone.
- Range on-site system, in factory system.
- 1.7 Describe the timing and method of testing during structural silicone glazing.
- Range testing for – weatherproofing, adhesion failure.

Outcome 2

Clean and prepare a substrate for glazing with structural silicone.

Performance criteria

- 2.1 Check and confirm the materials and equipment meet the job specifications.
- 2.2 Use prescribed cleaning agents to remove oil, grease, and soluble salts from substrate. Remove traces of cleaning agents from substrate surfaces.
- 2.3 Protect surfaces from contamination after cleaning and before application of sealant.
- 2.4 Prime a substrate for glazing with structural silicone.
- 2.5 Select a sealant for application.

Outcome 3

Glaze and apply structural silicone to a frame or panel.

Performance criteria

- 3.1 Apply foam tape and blocks.
- 3.2 Fix glass or panel to minimise movement and check for re-contamination.
Range may include use of temporary clamps for on-site glazing system.
- 3.3 Confirm that the primed surfaces are touch dry and apply masking tape and seal voids, gaps, and joints.
- 3.3 Tool the sealant into voids, gaps, and joints.
- 3.4 Remove the masking tape and clean any spills without damaging or contaminating surfaces.
- 3.5 Confirm the sealant is fully cured before moving the frame or panel or removing temporary clamps used for on-site glazing systems.
- 3.6 Complete testing according to schedule and technical requirements.

Outcome 4

Complete cleaning and storage requirements.

Performance criteria

- 4.1 Clean and store tools and plant used to glaze a frame using structural silicone.
Range plant may include – any machinery, vehicle, equipment (including personal protective equipment) used in a glazing operation.
- 4.2 Clean the installation and clear and clean the work area.

Replacement information	This unit standard replaced unit standard 2045 and unit standard 26033.
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Planned review date	31 December 2027
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	18 June 2015	31 December 2024
Review	2	24 November 2022	N/A

Consent and Moderation Requirements (CMR) reference	0048
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index>.

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.