Technical Data Sheet

DOWSIL™ 121 Structural Glazing Sealant

Fast-curing structural silicone sealant for use in structural and weatherseal applications.

FEATURES & BENEFITS

- Approved for structural and weatherseal applications[1]
- Primerless adhesion to glass, alodine and anodized aluminum[2]
- Adhesion to DOWSIL™ structural sealants for reglazing applications
- Adhesion and structural strength achieved in 24–48 hours
- Meets ASTM C719 Class 25 (G, A, O)
- Meets ASTM C1184 Structural Sealant Specification

COMPOSITION

- Two-part, neutral-cure, RTV silicone sealant

APPLICATIONS

- Repair and/or replacement of structurally glazed glass and other substrates where a fast cure is required
- On-site structural glazing, including storefront systems
- Attachment of panel stiffeners where quick cure is required
- In-shop structural glazing where the use of a two-part pump is not viable

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications.

Test*	Property[3]	Unit	Result
As Supplied – As Tested at 23°C (75°F) and 50% RH			
	Color – Base – Catalyst		Black/dark gray White
	Physical Form		Paste
ASTM D1475	Specific Gravity – Base – Catalyst		1.35 1.24
As Catalyzed – Mixed at 1:1 Base to Catalyst by Volume			
	Working Time	minutes	15–45
	Unit Handling Time at 23°C (75°F), minimum[4]	hours[3]	24
	VOC Content, mixed	g/L	< 25
ASTM D2202	Flow/Sag (slump)	inches (mm)	< 0.2 (< 5)
Cured – After 1 day at 75°F (23°C) and 50% RH			
ASTM C661	Durometer, Type A	points	30
ASTM D412	Tensile Strength	psi (Mpa)	300 (2.1)
ASTM C1135	Tensile Strength at 25%	psi (Mpa)	26 (0.18)
ASTM C1135	Tensile Strength, Ultimate	psi (MPa)	74 (0.62)
ASTM C1135	Elongation, Ultimate	%	300
Cured – After 7 days at 75°F (23°C) and 50% RH			
ASTM C661	Durometer, Type A	points	30–40
ASTM D412	Tensile Strength	psi (MPa)	300 (2.1)
ASTM C1135	Tensile Strength at 25%	psi (MPa)	40 (0.28)

[1]All structural glazing applications MUST be reviewed by the technical staff. If their recommendations are followed, Dow will issue a project-specific adhesive warranty.

[2]Certain sealing materials used in the anodizing process may increase the potential for use of primer to gain adhesion within a 24-hour period. DOWSIL™ Primer-C OS is recommended for fast and consistent adhesion, especially to *Kynar*®, polyester powdercoat and other high-performance substrates approved for architectural structural glazing applications.

TYPICAL PROPERTIES (CONT.)

Test*	Property[3]	Unit	Result
ASTM C1135	Tensile Strength, Ultimate	psi (MPa)	135 (0.93)
ASTM C1135	Elongation, Ultimate	%	325
ASTM D 719	Movement Capability	%	± 25

*ASTM: American Society for Testing and Materials.
[3]All testing was conducted using an 18-element, ½-inch diameter static mixer and a pneumatic two-part gun operating at 87 psi.
[4]Adhesion must be confirmed prior to removing temporary attachments or shipping to the job site. In general terms, glazed units can be moved or temporary attachments removed within 24 hrs depending on the temperature and relative humidity (RH). DOWSIL™ 121 Structural Glazing Sealant can achieve the necessary strength and adhesion properties in 24 hours when applied and cured at 23°C and 50% RH. Check adhesion before moving units.

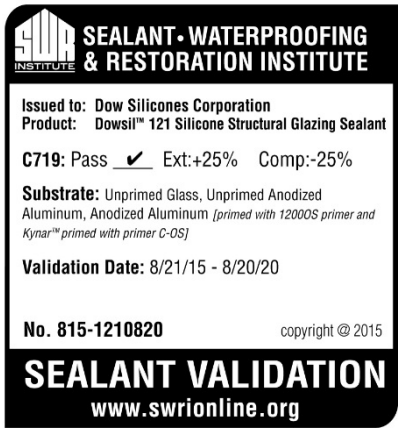
DESCRIPTION

DOWSIL 121 Structural Glazing Sealant is a two-part silicone formulation designed specifically for use in structural glazing applications in field and factory applications. The material is supplied in a two-part cartridge in which the catalyst is a smooth, white paste and the base is tinted either black or gray. Once catalyzed, the material cures into a medium-modulus, flexible silicone rubber that is flexible for use in structural and weatherseal applications. It can be used in deep, narrow joints to obtain a complete cure.

DOWSIL 121 Structural Glazing Sealant cures in deep section within 24 hours and generally achieves full adhesion within 48 hours. However, full cure time depends on joint design, substrate type, temperature and humidity.

HOW TO USE

Complete design and installation guidelines are contained in the Americas Technical Manual and the DOWSIL™ 121 Structural Glazing Sealant Installation Guide. They must be followed for warrantable applications when using this product.



Preparation

Clean all joints and glazing pockets, removing all foreign matter and contaminants such as grease, oil, dust, water, frost, surface dirt, old sealants or glazing compounds and protective coatings.

In reglazing applications where the structural sealant is performing per specification, a thin (less than 1/16 inch) layer of the existing DOWSIL™ sealant should remain on the substrate. DOWSIL 121 Structural Glazing Sealant will achieve primerless adhesion to the cured sealant.

Application

Install backup material or joint filler, setting blocks, spacer shims, and tape. Mask areas adjacent to joints to ensure clean sealant lines.

DOWSIL 121 Structural Glazing Sealant curing agent and base must be thoroughly mixed using an airless mixing system. DOWSIL 121 Structural Glazing Sealant is compatible with most existing pneumatic dispensing tools that accommodate 2 x 200 mL cartridges.

The air pressure used to dispense the material should be limited to 90 psi to ensure a good mix and to prevent damage to the sealant cartridge.

Remove the attached plug of the cartridge by following the instructions in the Installation Guide*;* do NOT cut it off. Insert the cartridge into the pneumatic dispensing tool and run material out of the cartridge to ensure that both base and catalyst are being extruded. Then, attach a new static mixer to the cartridge, and the material is ready for use.

Eighteen-element, ½-inch diameter static mixers are included in the packaging and are required to mix the material. A new static mixer must be used for each cartridge to ensure proper mixing of the material. Neither hand-mixing nor mechanical mixing is satisfactory due to the incorporation of air, resulting in altered physical properties.

HANDLING PRECAUTIONS

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT WWW.CONSUMER.DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

USABLE LIFE AND STORAGE

When stored in original, unopened containers in a dry location below 30°C (86°F), DOWSIL 121 Structural Glazing Sealant has a shelf life of 12 months from date of manufacture. Refer to product packaging for "Use By" date.

PACKAGING INFORMATION

DOWSIL 121 Structural Glazing Sealant is available in kits of 400 mL net fill (2 x 200 mL)/13.5 fl. oz. net fill (2 x 6.8 fl. oz.) cartridges.

LIMITATIONS

DOWSIL 121 Structural Glazing Sealant should not be applied:

- To building materials that bleed oils, plasticizers or solvents – materials such as impregnated wood, oil-based caulks, green or partially vulcanized rubber gaskets, and tapes
- On surfaces that will require painting or staining
- Once the air temperature falls below 0°F (-18°C)
- On frost-laden or wet surfaces
- In areas where abrasion and physical abuse are encountered
- In below-grade or continuous water immersion applications
- To surfaces that will be in direct contact with food

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

HEALTH AND ENVIRONMENTAL INFORMATION

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, www.consumer.dow.com or consult your local Dow representative.

LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow's sole warranty is that our products will meet the sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, DOW SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.

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