



Technical Data Sheet

DOWSIL™ SJ-169 Silicone WS Stone Sealant

FEATURES & BENEFITS

- Non-staining on natural stone and reduces residue rundown on metal and glass panels
- Medium modulus, high movement capability -- can accommodate $\pm 25\%$ movement in a properly designed joint
- Good unprimed adhesion to a wide variety of building materials such as natural stone, glass, metal, ceramic tile, fluorocarbon paint finishes and anodized aluminum
- Outstanding UV and weathering resistance
- Good working time
- 10-year Limited Weatherseal and Non-Staining Warranties are available
- One-part easy to use formulation
- Formulated to prevent staining of porous substrates and reduce streaking on glass and metal panels to improve building aesthetic performance
- Excellent weathering and durability resulting in longer lifecycle and superior long-term weatherproofing
- Excellent unprimed adhesion to most building substrates

COMPOSITION

- One-part, neutral cure silicone

Medium-modulus elastomeric sealant designed for weatherproofing sensitive natural stone, glass and metal panels

APPLICATIONS

DOWSIL™ SJ-169 Silicone WS Stone Sealant is specially formulated to prevent staining of porous substrates such as natural stone and minimize streaking on metal panels and glass. It forms a durable, flexible, watertight bond with most building materials and can be used for new and remedial construction applications.

TYPICAL PROPERTIES

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

Test*	Property	Unit	Result
As Supplied			
	Colours		Black, Grey, Dark Grey, Bronze, White, Limestone and Charcoal
ASTM C 679	Tack-free time, 50% R.H. +25°C	minutes	36
	Curing 25°C	Days	7-14
ASTM C 639	Flow (sag or slump)	mm	< 1
	VOC content	g/l	<85
As Cured – After 7 days at +25°C			
ASTM C 1135	Ultimate tensile strength	Mpa	0.7
ASTM C 1135	Ultimate elongation	%	400
ASTM C661	Durometer hardness, Shore A	points	24
ASTM C 719	Joint movement capability, glass, aluminum	%	± 25
ASTM C 1248	Staining/migration, natural stone		None

*ASTM: American Society for Testing and Materials.

DESCRIPTION

DOWSIL SJ-169 Silicone WS Stone Sealant is a medium modulus one part, elastomeric sealant specifically designed for weatherproofing sensitive natural stone, glass and metal panels where aesthetic considerations are important.

It cures to a flexible elastomer on exposure to atmospheric moisture, producing a durable, weather-resistant seal with the ability to form strong bonds with most building materials. Because of its medium modulus and good adhesion, it provides excellent weatherproofing performance in dynamically moving building joints.

Colours

DOWSIL SJ-169 Silicone WS Stone Sealant is available in 7 colours: black, grey, dark grey, bronze, limestone, white and charcoal.

WEATHERSEAL JOINT DESIGN

A thin bead of silicone will accommodate more movement than a thick bead (see Figure 1). DOWSIL SJ-169 Silicone WS Stone Sealant should be no thicker than 12 mm and no thinner than 6 mm for joints where excessive movement is expected. Ideally, the ratio of joint width to sealant depth should be about 2:1.

Figure 1:

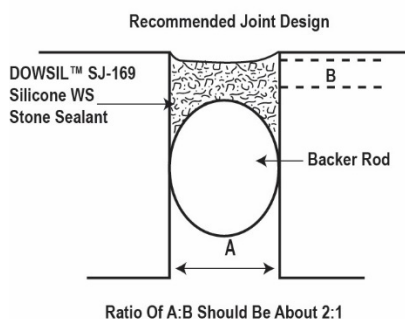
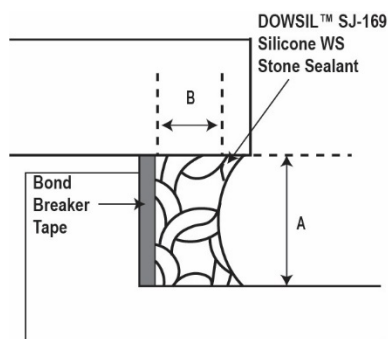


Figure 2:



Open-cell polyurethane foam, closed-cell polyethylene or non-gassing polyolefin are the recommended backing materials for most joints; use polyethylene tape for joints too shallow to allow backer rod (see Figure 2). These materials permit application for a thin bead and act as bond breakers, which allow the silicone sealant to move freely with the joint.

The width of building expansion joints vary because of seasonal and daily changes in temperature. If DOWSIL SJ-169 Silicone WS Stone Sealant cannot be installed when the design width is half way between the dimensional extremes, the designed joint should be at least twice the total anticipated joint movement. Good architectural practice calls for joint design of four times the anticipated movement due to construction tolerances and material variations.

Joints should be designed to allow installation and retention of bond breaking, backing material during the application and curing of DOWSIL SJ-169 Silicone WS Stone Sealant.

Joint Dimensions:

For small curtain wall panels allow a minimum width of 6 mm for the sealant bead. With larger panels, or those in which a great deal of movement is expected, the joint size should be based on the calculated joint movement.

HOW TO USE

Surface 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.

Non porous substrates (i.e. metal and glass) should be cleaned with solvent using the two cloth cleaning method. In all cases solvent should be wiped on and off with clean white lint-free cloths. Detergent or soap and water treatments are not acceptable.

Porous substrates should be cleaned by grinding, saw cutting, blast cleaning (sand or water) or mechanical abrading, or a combination of these methods as required to provide a sound, clean, dry surface for sealant application. Dust, loose particles, etc., should be blown out of joints with oil-free compressed air or vacuum cleaned.

Priming:

When using DOWSIL SJ-169 Silicone WS Stone Sealant, priming is not usually required. However, sealant adhesion should always be tested to determine the need for a primer. Where required, primer should be applied in a thin film to the joint surface using a clean lint-free cloth and allowed to dry before sealant application.

Masking:

Areas adjacent to joints may be masked to ensure neat sealant lines. Do not allow masking tape to touch clean surfaces to which the silicone sealant is to adhere. Tooling should be completed in one continuous stroke immediately after sealant application and before a skin forms. Masking tape should be removed immediately after tooling.

Backing Materials:

Open cell polyurethane foam, closed-cell polyethylene or non-gassing polyolefin are the recommended backing materials. Polyethylene tape is recommended for joints too shallow to prevent three-sided adhesion.

Method of Application:

Install backing material or joint filler, setting blocks, spacer shims and tapes as specified. Apply DOWSIL SJ-169 Silicone WS Stone Sealant in a continuous operation using a positive pressure adequate to properly fill and seal the joint. Tool the DOWSIL SJ-169 Silicone WS Stone Sealant with light pressure to spread the sealant against backing material and the joint surfaces before a skin forms. A tool with a convex profile is recommended to keep the sealant within the joint. Do not use soap or water as a tooling aid. Remove masking tape as soon as the bead is tooled. DOWSIL SJ-169 Silicone WS Stone Sealant can be applied at outdoor temperatures as low as -25°C provided that surfaces are clean, dry and frost free. However, sealant will require considerable time to cure or may not cure in colder (below 4°C) temperatures.

It is imperative that uncured silicone sealants are not allowed to contact surfaces which cannot be abraded, such as polished granite or other natural stone. Because excess silicone sealant cannot be completely removed with organic or chlorinated solvents, these surfaces must be masked or extreme care taken to prevent any silicone from contacting them during sealant application. Once an uncured sealant contacts the surface, it will leave a film that may change the aesthetic surface characteristic of that substrate.

In cases where uncured sealant is inadvertently applied to non porous adjacent surfaces, the sealant should be cleaned up, while still uncured, using a commercial solvent such as xylene, toluene or methyl ethyl ketone. Observe proper precautions when using flammable solvents.

Maintenance

No maintenance is needed. If sealant becomes damaged, replace the damaged portion. DOWSIL SJ-169 Silicone WS Stone Sealant will adhere to cured. DOWSIL SJ-169 Silicone WS Stone Sealant with only a preparatory solvent wipe to remove accumulated dirt.

APPLICABLE STANDARDS

DOWSIL SJ-169 Silicone WS Stone Sealant meets or exceeds the test requirements of:

- GB23261-2009 1 SR 25LM

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 at or below +30°C in the original unopened containers.

DOWSIL SJ-169 Silicone WS Stone Sealant has a shelf life of 12 months from date of manufacture as indicated by the “use by date” included on the product packaging.

PACKAGING INFORMATION

DOWSIL SJ-169 Silicone WS Stone Sealant is supplied in 590ml Turbo foil sausages.

LIMITATIONS

This product is not intended for use:

- In structural glazing applications or where the sealant is intended to be used as an adhesive
- In interior applications (may yellow if not exposed to UV)
- In horizontal joint abrasion and where physical abuse are likely to be encountered
- In spaces totally confined from atmospheric moisture during cure
- On frost-laden or damp surfaces
- For prolonged submersion in water
- On surfaces that might bleed oils, plasticizers or solvents such as impregnated wood, oil-based caulks, green or partially vulcanized rubber gaskets or tapes bitumen- impregnated boards, felts, or sheets
- In below-grade applications
- On substrates made of poly-carbonate

DOWSIL SJ-169 Silicone WS Stone Sealant will not improve pre-existing staining or residue rundown conditions. Surface appearance of any sealant will depend upon environmental conditions.

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

TECHNICAL SERVICES

Complete technical information and literature are available from Dow and authorized building sealant distributors. Laboratory facilities and technical service including Print Review, Adhesion Testing Compatibility Testing and Stain Testing are available from Dow.

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.

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