



Technical Data Sheet

DOWSIL™ 123 Silicone Seal

Preformed silicone seal for weatherproofing applications

Features & Benefits

- Economical, high-performance alternative to cutting-out and recaulking existing failed weatherproofing sealants
- Extremely low-modulus alternative to wet sealants
- High-movement seal capable of +200/-75 percent joint movement
- High-shear movement seal capable of handling specified live loads, wind sway and seismic movements in a properly designed joint
- SWRI-validated performance
- Ability to provide a complete weatherseal system when used with DOWSIL™ ALLGUARD Silicone Elastomeric Coating
- Available in custom designs to allow easier application and smoother transitions
- Available in matte finish (similar to EIFS)

Composition

- Preformed silicone elastomer extrusion

Applications

DOWSIL™ 123 Silicone Seal is specifically designed for use in repair of failed construction joints and glazing details due to design error, field failure or when the life span of sealants and gaskets has expired. It can be used in a variety of applications such as:

- An economical, high-performance alternative to cutting-out and recaulking existing failed weatherproofing sealants
- A restoration joint on EIFS at both the EIFS-to-EIFS joints and window perimeter joints
- An aluminum splice in high-performance window and curtainwall applications
- A high-performance flexible flashing material ideal for maintenance crews
- A uniform-looking parapet or coping joint
- A leak-free transition seal
- A seal for leaking skylights

Typical Properties

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

Test ¹	Property	Unit	Result
As Supplied — cured rubber extrusion			
ASTM D 2240	Durometer Hardness, Shore A	points	25
ASTM D 412	Tensile Strength	psi (MPa)	300 (2.07)
ASTM D 412	Elongation	percent	500
	Tear Strength, die B	ppi (kN/m)	100 (17.5)
21 Day Sealant Cure — 1/2" (13 mm) joint with 1 1/2" (38 mm) wide DOWSIL™ 123 Silicone Seal bonded with DOWSIL™ 795 Silicone Building Sealant			
ASTM C 1135 ²	Ultimate Strength	psi (MPa)	40 (0.275)
ASTM C 1135	Ultimate Elongation	percent	800
ASTM C 1135	Stress at 25% Elongation	psi (MPa)	3.0 (0.021)
		pli (N/m)	1.5 (263)
ASTM C 1135	Stress at 50% Elongation	psi (MPa)	5.0 (0.034)
		pli (N/m)	2.5 (438)
ASTM C 1135	Stress at 50% Compression	psi (MPa)	< 5 (0.034)
		pli (N/m)	< 2.5 (438)
ASTM C 1523 ²	Movement Capability	percent	+200/-75
Unprimed adhesion of DOWSIL™ 795 Silicone Building Sealant to DOWSIL™ 123 Silicone Seal			
ASTM C 794	Peel Strength, DOWSIL™ 795 Silicone Building Sealant	pli (N/mm)	25 (4.38)

1. ASTM: American Society for Testing and Materials
2. ASTM C 1135 and C 1523 used for the joint configuration shown in Figure 1

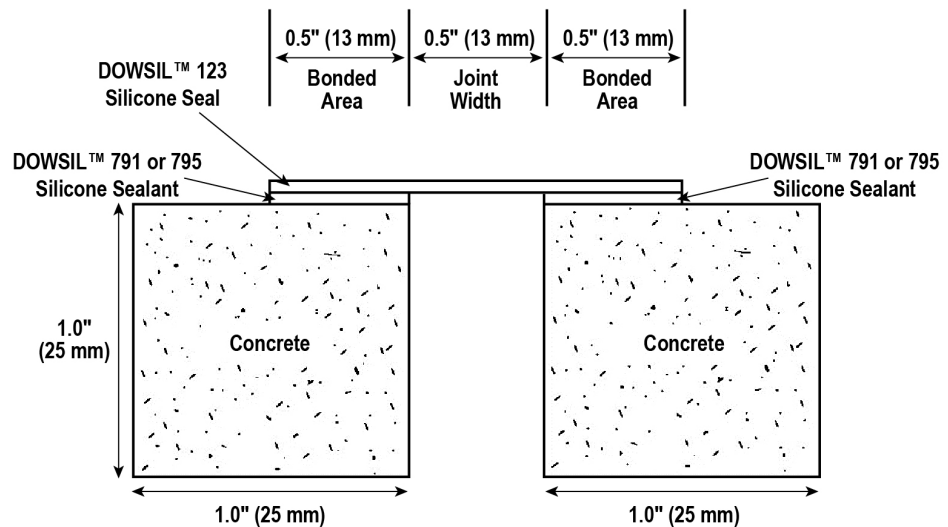


Figure 1: Joint configuration modifications of ASTM C 1135 and C 1523 tests used for determining typical properties using 1 1/2" (38 mm) wide DOWSIL™ 123 Silicone Seal.

Description

DOWSIL™ 123 Silicone Seal is a preformed, ultra-low modulus silicone extrusion that is bonded to substrates using DOWSIL™ 791 Silicone Weatherproofing Sealant or DOWSIL™ 795 Silicone Building Sealant.¹ Easy-to-install DOWSIL™ 123 Silicone Seal can be used in both new and remedial construction applications.

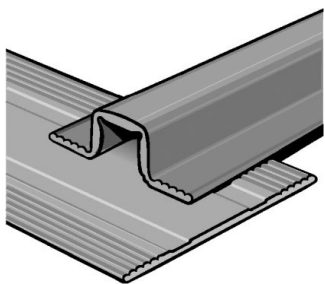
¹Other DOWSIL™ Sealants may be recommended depending on the installation requirements.

DOWSIL™ 123 Silicone Seal is available in the following standard colors: black, white, grey, bronze, limestone and sandstone. This product is also available in custom colors (1000 linear feet [305 m] minimum).

The same color of DOWSIL™ 791 Silicone Weatherproofing Sealant or DOWSIL™ 795 Silicone Building Sealant should be used to bond the seal to the substrate.

In addition to standard and custom colors, DOWSIL™ 123 Silicone Seal is also available in a matte finish. The color can also be altered at the job site using DOWSIL™ ALLGUARD Silicone Elastomeric Coating.

In addition to custom colors, DOWSIL™ 123 Silicone Seal is also available in custom extrusions with grooves to facilitate bending and dimensional shapes. These shapes may be custom designed to fit mullion and window systems and to work with the flat strips to provide improved aesthetics as well as maximum weatherproofing protection. Contact your sales application engineer to discuss your design concepts and learn how they can be captured in long-lasting silicone materials.



DOWSIL™ 123 Silicone Seal custom designs are available to meet aesthetic and weathersealing needs with a single product. An example sketch is shown in Figure 2.

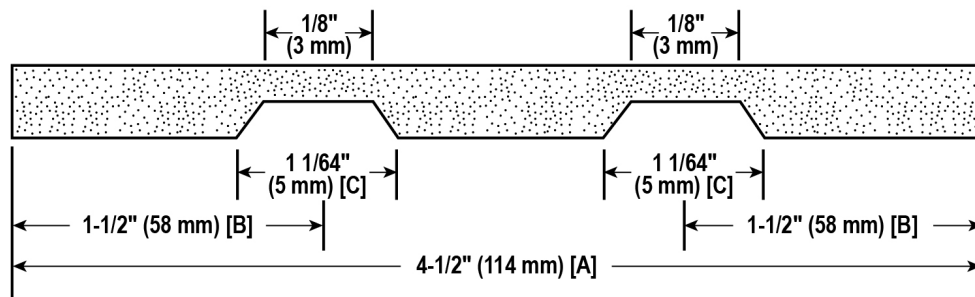


Figure 2: Example Sketch of a Custom Design. Design indicates:

- Total width (A)
- Placement of grooves (B), specifying the distance from the strip's edge to the center of the grooves.
- Width of grooves (C) — unless specified otherwise, these are 1 1/64" (5 mm) wide. All grooves will be 1/32" (1 mm) deep.

SWRI-validated Performance



How to Use

DOWSIL™ 123 Silicone Seal must be bonded to clean, dry, frost-free, dust-free substrates using DOWSIL™ 791 Silicone Weatherproofing Sealant or DOWSIL™ 795 Silicone Building Sealant. Field adhesion testing should be done to determine if primer is required for proper adhesion of DOWSIL™ 791 Silicone Weatherproofing Sealant or DOWSIL™ 795 Silicone Building Sealant to the substrate.²

²Other DOWSIL™ Sealants may be recommended depending on the installation requirements.

Preparation Work

Porous surfaces should be cleaned with abrasion cleaning followed by blasts of oil-free compressed air. If high-pressure water cleaning is necessary, use caution to prevent water from entering the structure through the existing failed joint. Exterior surfaces must be visibly dry before installing DOWSIL™ 123 Silicone Seal.

Nonporous surfaces should be cleaned using the two-cloth solvent wipe as outlined in our sealant application guidelines.

Masking

Apply masking tape in areas of high visibility to ensure good aesthetics (see Figure 3).

Application

Apply a bead of DOWSIL™ 791 Silicone Weatherproofing Sealant or DOWSIL™ 795 Silicone Building Sealant to each side of the joint according to the following schedule.

Substrate	Coverage linear ft (m)/tube	Bead size
Rough	20–40 (6–12)	1/4" (6 mm)
Smooth	70–120 (21–37)	1/8" (3 mm)

How to Use (Cont.)

Note: Rough surfaces will require larger beads of sealant to seal the valleys of the substrate. The sealant should be applied approximately 1/4" (6 mm) inside the masking tape on both sides of the joint.

Within 10 minutes of sealant application, press the extrusion into the sealant to wet the extrusion, substrate, and sealant. A roller can be used to apply consistent pressure to ensure uniform contact. The ridges on the back of DOWSIL™ 123 Silicone Seal will help ensure proper sealant coverage. The minimum bonded area must be at least 3/8" (9 mm) (see Figure 3). At the end of the joint, cut the extrusion with a razor knife.

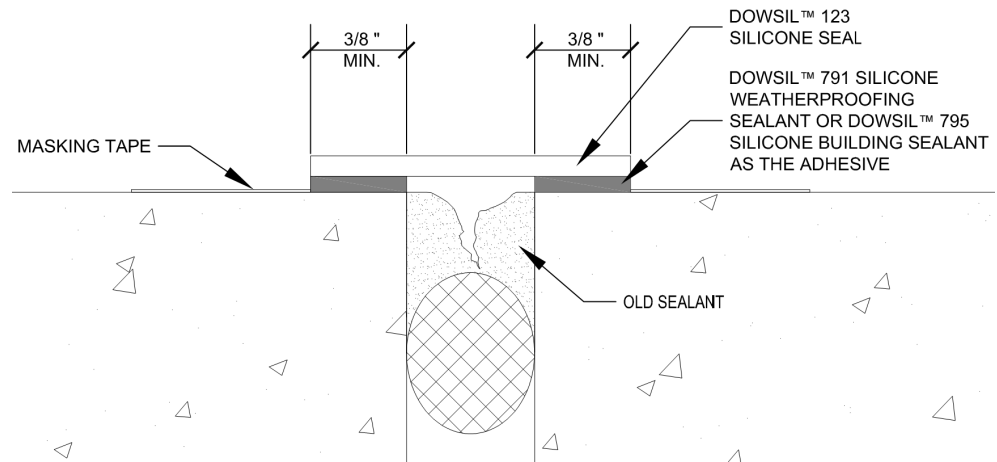


Figure 3: Recommended joint design using DOWSIL™ 123 Silicone Seal and DOWSIL™ 791 Silicone Weatherproofing Sealant or DOWSIL™ 795 Silicone Building Sealant.

Horizontal joints must be completed before application of vertical joints. Vertical strips of DOWSIL™ 123 Silicone Seal must overlap horizontal strips as shown in Figure 4.

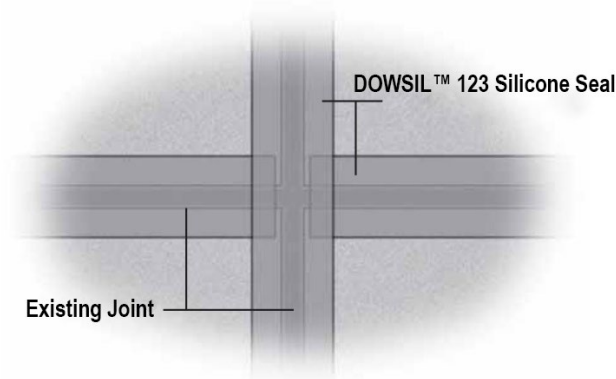


Figure 4: Overlapping vertical application of DOWSIL™ 123 Silicone Seal over the horizontal seal.

How to Use (Cont.)

Clean-Up

Remove masking tape and excess sealant.

Maintenance

No maintenance should be needed. The surface can be cleaned with soap and water.

If the seal becomes damaged, replace the damaged portion. DOWSIL™ 791 Silicone Weatherproofing Sealant or DOWSIL™ 795 Silicone Building Sealant will adhere to the existing DOWSIL™ 123 Silicone Seal with only a preparatory solvent wipe to remove accumulated dirt.

Handling Precautions

This product is considered an Article as outlined in OSHA's Hazardous Communication Standard (29 CFR 1910.1200), and thus is not required to have a Safety Data Sheet (SDS). This product does not pose any health, physical, or environmental hazards as outlined under 29 CFR 1910.1200 (Hazard Communication).

This product is not regulated under the Canadian Controlled Products Regulations.

Packaging Information

DOWSIL™ 123 Silicone Seal is available in 100 foot rolls. The thickness of all standard extrusions is 0.079" (2 mm). Standard stocked sizes include widths of 1", 1 1/2", 2", 2 1/2", 3", 4", 5" and 6" (25, 38, 51, 64, 76, 102, 127 and 152 mm) in black (also stocked in 12"), white, grey, bronze, limestone and sandstone colors. Standard, but non-stock sizes, include widths of 3 1/2", 4 1/2" and 5 1/2" (89, 114 and 140 mm) in all colors. All sizes of blue spruce, dusty rose, adobe tan, charcoal and rustic brick are non-stock items. Custom sizes are available in 1 to 6" (25 to 152 mm) in 0.5" (13 mm) increments, and 7 to 12" (178 to 305 mm) in 1" (25 mm) increments.

Limitations

DOWSIL™ 123 Silicone Seal is not intended for use:

- With any sealant other than DOWSIL™ 791 Silicone Weatherproofing Sealant or DOWSIL™ 795 Silicone Building Sealant
- In below-grade applications

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, dow.com, or consult your local Dow representative

Disposal Considerations

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products — from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow unless noted otherwise in the Handling Precautions section of the technical datasheet.

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