

SWS*

silicone weatherproofing sealant

Product Description

SWS weatherproofing sealant is a single-component, neutral cure silicone, which is an excellent candidate for use in new or remedial weathersealing applications. SWS weatherproofing sealant exhibits negligible change in physical properties after weathering and upon cure, produces a low-modulus, long-life, formed-in-place durable rubber building joint & glazing sealant.

Typical Performance Properties

- **Silicone Durability** - cured silicone rubber exhibits excellent long-term resistance to natural weathering, including: ultraviolet radiation, high and low temperatures and rain and snow, with little change in elasticity.
- **High Performance** - SWS weatherproofing sealant offers the durability of a true silicone sealant but at an economical price level similar to lesser-performing sealant types.
- **±35% Movement Capacity** - can accommodate 35% movement in both extension and compression and has excellent recovery after cycling.
- **Primerless Adhesion** - to many substrates and finishes. May be considered a candidate for use with the following materials: glass, polycarbonate, vinyl, plastics, wood, painted & anodized aluminum, brick, terra-cotta, ceramic and porcelain materials, concrete and natural stones. Some finishes or substrates may require a primer.
- **Good Workability** - temperature stable paste which is easily gunned and tooled under hot and cold conditions.
- **Extended Work Life** - designed to allow sufficient time for placement and tooling before skinning.

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We are helping customers solve product, process, and performance problems; our silanes, fluids, elastomers, sealants, resins, adhesives, urethane additives, and other specialty products are delivering innovation in everything from car engines to biomedical

devices. From helping to develop safer tires and keeping electronics cooler, to improving the feel of lipstick and ensuring the reliability of adhesives, our technologies and enabling solutions are at the frontline of innovation.



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Basic Uses

- SWS weatherproofing sealant is useful as a weatherproofing material when sealing between dissimilar or similar materials in either new or remedial glazing and sealing applications, window perimeters and punched openings.
- SWS weatherproofing sealant is useful for sealing to precast concrete, site cast concrete and tilt-up concrete joints.
- SWS weatherproofing sealant is useful as a general purpose sealant for seams and curtainwall frames, screw heads, back pans, etc.

Packaging

SWS weatherproofing sealant is available in 10.1 fl. oz. (299 ml) plastic caulking cartridges and 20.0 fl.oz. (591 ml) foil sausage packs.

Colors

SWS weatherproofing sealant is available in 7 standard colors: White, Black, Limestone, Light Gray, Aluminum Gray, Bronze, Precast White

Limitations

SWS weatherproofing sealant is not:

- For use in structural glazing applications
- For use in food contact applications.
- For use in applications where the product will be in continuous contact with water.
- Paintable (except when using GE SilShield* SEC2400 silicone elastomeric coating).
- For use on wet, damp, frozen or contaminated surfaces.

Technical Services

Additional technical information or literature may be available by contacting Momentive Performance Materials¹ at 1-800-255-8886.

Applicable Standards

SWS weatherproofing sealant meets or exceeds the requirements of the following specifications: **American Society for Testing & Materials International.**

- ASTM C920 Standard Specification for Elastomeric Joint Sealants; Type S, Grade NS, Class 35, Use A, G, M, O

Joint Designs and Dimensions

Joint Movement - All moving joints should be designed so as not to allow three-sided adhesion of the sealant to occur. Three-sided adhesion hinders the ability of the sealant to extend and compress freely as desired and can lead to early joint failure (reference ASTM C1193 *Standard Guide for Use of Joint Sealants*).

Joint Width - When using SWS weatherproofing sealant, the designed joint width must be at least 3X the total anticipated joint movement. A minimum width of $\frac{1}{4}$ " is recommended in all applications and the recommended sealant profile is an hourglass shape with the depth of the sealant over the crown of the backer rod between $\frac{1}{8}$ " and $\frac{3}{8}$ ".

Joint Backer Materials

Backer materials, typically backer rod, provide the following benefits to aide in the correct application of SWS weatherproofing sealant.

- 1.) To control and provide the desired sealant depth.
- 2.) Create a formed joint cavity that allows for the desired hourglass sealant shape.
- 3.) Provide a firm backup which helps attain full wetting of the substrates when the sealant is tooled.
- 4.) Act as a bond breaker to eliminate adhesion on the backside of a joint (three-sided adhesion).

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Joint Designs and Dimensions (continued)

Typical Properties – Supplied

Property	Value	Test Method
Consistency	Paste	
Polymer	100% Silicone	
VOC	1.20 wt.%	WPSTM C1454
Work Life	30-40 minutes	
Tack Free Time (@ 72°F, 50% RH)	3-4 hours	ASTM C679
Sag/Slump	0.1" max.	ASTM D2202

Typical Properties – Cured

Property	Value ⁽¹⁾	Test Method
Hardness	22	ASTM D2240
Tensile at 25%	19.3 psi (0.13 MPa)	ASTM 1135
Tensile at 50%	30.6 psi (0.21 MPa)	ASTM 1135
Peel Strength (21-day cure @ 75°F (21°C) 50% RH)	>45 pli	ASTM C794
Movement Capability	±35%	ASTM C719
Service Temperature Range (after cure)	-55°F to +250°F (-48°C to 121°C)	
Application Temperature Range	+40°F to +122°F (4°C to 50°C)	
Cure Time (1/4" or 6 mm deep section) @ 75°F (24°C) 50% RH	3-4 days	
Full Cure (most common bead sizes)	7-14 days	

(1) Average value. Actual value may vary.

Installation

Sealants may not adhere or maintain long-term adhesion to substrates if the surface is not prepared and cleaned properly before sealant application. IN ALL CASES THE APPLICATOR MUST CONFIRM THE ACCEPTIBILITY OF EACH SEALANT-SUBSTRATE COMBINATION WITH A SITE ADHESION TEST PRIOR TO PROCEEDING WITH PROJECT INSTALLATION. A GE sealant primer may be selected to enhance sealant bonding on some difficult to adhere to substrates. Momentive Performance Materials¹ can provide information and suggestions to user upon request.

Surface Preparation

Glass, Metals Paints, Smooth Surfaces, etc.

- Smooth surfaces can be wiped clean using a rag dampened with a cleaning solvent (Isopropyl Alcohol is typically useful). Proceed by cleaning the surfaces using a rag wetted with solvent and immediately use a second clean rag to wipe the wet solvent from the surface before it evaporates. Repeat this procedure as necessary until no contaminants are visible on the second cleaning rag.
- All surfaces that are to receive sealant must be clean, dry and free of contaminants (such as moisture/frost, oils, concrete form release agents, old sealants, asphalt and other surface treatments, etc.) to allow for optimal adhesion.

NOTE: When handling solvents, refer to manufacturer's MSDS for information on handling, safety and personal protective equipment.

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Surface Preparation (continued)

Concrete, Brick, Masonry, Rough Surfaces, etc.

- Rough surfaces can be cleaned by wire brush, mechanical abrading, grinding or a combination of these methods to provide a stable clean surface for sealant application. Secondly, follow this with an air blow or brush (soft-bristled) to remove dust.
- All surfaces that are to receive sealant must be clean, dry and free of contaminants (such as moisture/frost, oils, concrete form release agents, old sealants, asphalt and other surface treatments, etc.) to allow for optimal adhesion.
- Difficult or nearly impossible to see on a joint substrate, frost is likely to develop on substrates when temperatures drop near the freezing point. Since frost and moisture will interfere with proper sealant adhesion, it is important to confirm that substrates are dry prior to application of the sealant.

Sealant Application

1. Cut tapered nozzle of caulking cartridge; suggest cutting nozzle at a 45° angle to assist in the dispensing & application of the sealant. The further down you cut, the bigger the opening and resulting bead size. Keep in mind that there is a 1/4" minimum contact surface of sealant required on all surfaces.
2. If applicable, puncture foil tip seal with nail and place cartridge in caulking gun.
3. Hold gun at a 45° angle to surface and squeeze trigger using even pressure.
4. Once sealant begins to dispense, move gun along at even pace. The sealant should fill the gap and touch both surfaces. The best bead is usually achieved by pushing the sealant out in a forward motion.
5. A tooling knife is then used to smooth the bead. Bead should be tooled within a few minutes of dispensing or before skin over (see typical properties for "tooling time").
6. Leave sealant undisturbed until sufficient cure.

Tooling

- Tool or strike the sealant with a concave tool applying light pressure to spread the material against the back-up material and the joint surfaces to ensure a void-free application.
- On sill applications, tool the sealant to shed water and to eliminate ponding.
- Tooling agents such as water, soap, or detergent solutions are not recommended.

Masking

Masking tape is recommended where appropriate to ensure a neat job and to protect adjoining surfaces from over-application of sealant. Masking tape should be removed immediately after tooling the sealant and before the sealant begins to skin over (tooling time).

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Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

Product Safety, Handling and Storage

Customers considering the use of this product should review the latest Material Safety Data Sheet and label for product safety information, handling instructions, personal protective equipment if necessary, and any special storage conditions required. Material Safety Data Sheets are available at www.momentive.com or, upon request, from any Momentive Performance Materials¹ representative. Use of other materials in conjunction with Momentive Performance Materials¹ products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

Emergency Service

Momentive Performance Materials¹ maintains an around-the-clock emergency service for its products. The American Chemistry Council (CHEMTREC), Transport Canada (CANUTEC), and the Chemical Emergency Agency Service also maintain an around-the-clock emergency service for all chemical products:

Location	GE Branded Products	All Chemical Products
Mainland U.S., Puerto Rico	518.233.2500	CHEMTREC: 800.424.9300
Alaska, Hawaii	518.233.2500	CHEMTREC: 800.424.9300
Canada	518.233.2500	CANUTEC: 613.996.6666 (collect) or CHEMTREC: 800.424.9300
Europe, Middle East, Africa	+32.(0)14.58.45.45 (Belgium)	CHEMTREC: +1-703.527.3887 (collect)
Latin America, Asia/Pacific, all other locations worldwide	+518.233.2500	CHEMTREC: +1-703.527.3887 (collect)
At sea	Radio U.S. Coast Guard, which can directly contact Momentive Performance Materials ¹ at 518.233.2500	CHEMTREC: 800.424.9300

DO NOT WAIT. Phone if in doubt. You will be referred to a specialist for advice.

CUSTOMER SERVICE CENTERS

North America

E cs-na.silicones@momentive.com

- | | | |
|---|--------------------------|--------------------------|
| • Specialty Fluids | T +1.800.523.5862 | F +1.304.746.1654 |
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-

Latin America

E cs-la.silicones@momentive.com

- | | | |
|--|---------------------------|---------------------------|
| • Argentina & Chile | T +54.11.4862.9544 | F +54.11.4862.9544 |
| • Brazil | T +55.11.4534.9650 | F +55.11.4534.9660 |
| • Mexico & Central America | T +52.55.5899.5135 | F +52.55.5899.5138 |
| • Venezuela, Ecuador, Peru
Colombia & Caribbean | T +58.212.285.2149 | F +58.212.285.2149 |
-

Europe, Middle East, Africa and India

E cs-eur.silicones@momentive.com

T +00.800.4321.1000
T +31.164.225350

Pacific

E cs-ap.silicones@momentive.com

T +1.800.820.0202
T +0.81.276.20.6182
F +81.276.31.6259

Worldwide Hotline

T +1.607.786.8131
T +1.800.295.2392
F +1.607.786.8309

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