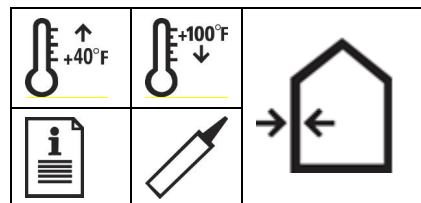


PRODUCT BULLETIN

StoSeal® STPE Sealant

Product Number: 81802



PRODUCT DESCRIPTION

StoSeal STPE Sealant is a high-movement, low modulus, non-sag one-component silyl-terminated polyether joint sealant designed for use on vertical above grade walls in a wide range of construction applications.

StoSeal STPE Sealant complies with or has been tested in accordance with:

- ASTM C920: Type S, Grade NS, Use NT, A, M, Class 100/50
- Federal Spec. TT-S-00230C Type II
- AAMA 808.3 (Type1) Exterior Perimeter Sealing
- ASTM C1382 for use with EIFS

FEATURES	BENEFITS
+100%/-50% movement	Suitable for low and high movement joints
Easy to gun and tool, fast cure and tack-free time	Simplifies installation
Paintable	Can be top coated to suit most color requirements
Excellent adhesion	Bonds to most construction materials without a primer
Isocyanate-free, very low VOC	Non-bubbling, very low odor
High resistance to moisture, UV exposure, weathering, aging and shrinkage	Durable, long-lasting

Packaging: 20 oz (0.6L) sausage packs, 20 sausage packs per carton

Shelf Life: 12 months in original, unopened, properly stored packaging.

Storage: Store in a cool (less than 80°F [27°C]), dry area in original unopened packaging. Protect from extreme heat (90°F [32°C]), freezing, wet areas, heat sources, and direct sunlight. Store away from sources of ignition.

Note: the material may feel hard in the sausage packaging, depending on storage conditions. At room temperature, shake the material with one hand, then roll the sausage on a flat surface to soften.

USES

StoSeal STPE Sealant bonds to most common construction materials including concrete, masonry, stucco, stone, steel, aluminum, wood, vinyl, and fiber cement. Use it for multiple joint sealant applications in Sto proprietary wall systems and other wall assemblies:

- Perimeter weather seal around windows, doors, scuppers, and other through wall penetrations
- Perimeter weather seal around fixture attachments
- Deflection joint sealant at floor lines
- Thermal expansion and contraction joints
- Control joints
- Panel-to-Panel joints between precast, metal frame, and other prefabricated wall construction
- Bedding sealant for flashing, flanged windows, and similar applications
- Air seal at interior or exterior joints and seams for air barrier continuity

Color Selection: ten standard colors

Color No.	Color
81802-740	White
81802-741	Black
81802-742	Off-White
81802-743	Tan
81802-744	Stone
81802-745	Limestone
81802-746	PreCast White
81802-747	Special Bronze
81802-748	Medium Bronze
81802-749	Aluminum Gray

Coverage (per 20 oz [0.6L] sausage pack)

Joint Width	Joint Depth		
	Lineal Ft (m) at ¼ in (6mm)	Lineal Ft (m) at 3/8 in (9mm)	Lineal Ft (m) at ½ in (12mm)
½ (13)	24 (7.3)	16 (4.9)	12 (3.6)
5/8 (16)	20 (6.1)	14 (4.3)	10 (3.0)
¾ (19)	16.5 (5.0)	12 (3.6)	8 (2.4)
7/8 (22)	14 (4.3)	10 (3.0)	7 (2.1)
1 (25)	12.5 (3.8)	8 (2.4)	6 (1.8)
1-¼ (32)	-	-	5 (1.5)

Coverages are approximate. Coverage may vary depending on joint condition, application technique, waste factor, and other variables that may exist.

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SURFACE PREPARATION

Surfaces must be fully cured, structurally sound, clean, dry, and free of frost, damage, loose material, and all bond-inhibiting materials, including dirt, dust, efflorescence, form oil, grease, wax, paint, bitumen, corrosion, laitance, and other foreign matter.

SUBSTRATE	PREPARATION
Concrete	Remove form release agent, ensure surface is clean, dry, and free of laitance or other weak surface conditions
Masonry	Wire brush to a sound, solid surface free of laitance or other weak surface conditions
Galvanized Metal or Aluminum	Solvent wipe with clean cotton cloth and allow to dry
Wood (uncoated)	Ensure surface is clean and dry
Fiber Cement (uncoated)	Ensure surface is clean and dry
Stucco Casing Bead	Solvent wipe with clean cotton cloth and allow to dry
Stucco	Ensure portland cement stucco is clean, dry, and free of laitance or other weak surface conditions
EIFS	Ensure reinforcing mesh is fully embedded in base coat and the surface is smooth and free of laitance or other weak surface conditions.

IMPORTANT: the above guidance is general in nature. Individual project or substrate conditions may require special consideration and some substrates may require priming. Always conduct field adhesion tests to verify bond strength to substrates and to determine if a primer is needed. Refer to ASTM C1521, *Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints*, for additional information

APPLICATION

Provide adequate ventilation and ensure surface and ambient temperatures are between 32°F (0°C) and rising and 100°F (38°C) during application and curing period. In hot weather apply on the shady side of the structure before daytime air and surface temperatures reach their peak. Apply only to fully cured, structurally sound, clean, dry, properly prepared, frost-free surfaces.

Joint Width Sizing: size the width of the joint based on calculated movement and not less than ½ inch (13mm) or more than 1-1/4 inch (32mm) in width.

Backing Material: use bi-cellular polyethylene foam backer¹ rod as the backing material for the sealant. Size the backer rod to friction fit inside the joint. Use a blunt tool to Insert the backer

1. SOF-Rod is a bi-cellular polyethylene foam backer rod produced by Nomaco, 501 Innovative Way, Zebulon, NC, 27597, Tel: 919 269 6500, Nomaco.com.

APPLICATION (continued)

rod to a uniform depth that allows for the proper joint sealant width-to-depth ratio of 2:1. **IMPORTANT:** when sealant is used as a secondary sealant behind an exterior weather seal use open cell foam backer rod behind the secondary (interior) sealant to enable full cure.

Joint Sealant Configuration: for optimum joint sealant performance install sealant in an hourglass configuration.

Mixing: no mixing required. Ready to use.

Priming: most surfaces do not require priming. Make the determination of whether to prime on the basis of field adhesion tests. Where priming is necessary, 3M™ All Purpose Primer P591, is acceptable. Adhere to application, safety, and handling instructions. Refer to manufacturer's Technical Data Sheet and SDS.

Field Adhesion Testing: always conduct field adhesion tests to verify adhesion to substrate(s). Refer to ASTM C1521, *Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints*

Application of StoSeal STPE Sealant: apply sealant with a premium high ratio caulking gun that is suitable for use with high viscosity materials. Tool while material is still wet, usually within 2-3 minutes of gun application and before the material forms a skin, to ensure intimate contact with and wetting of the substrate(s). Do not wet or apply soapy water to assist in tooling.

Drying/Curing: Product dries and cures with moisture in the atmosphere. At standard conditions (50% RH and 70°F [21°C]) drying generally occurs within the first few hours of application and full cure occurs at 21 days. Drying time and full cure time is slower with low temperature/low humidity and faster with high temperature/high humidity.

Clean Up: Clean tools by removing wet material with a rag before the material cures. Cured material can be removed by scraping, then wiping with isopropyl alcohol or ketone-solvents. Exercise care when handling solvents and strictly follow precautions on packaging and manufacturer's SDS.

Painting over StoSeal STPE Sealant: Verify adhesion before proceeding. Due to differences in gloss and texture, color matched paints/coatings will not necessarily match adjacent materials. Paint/coating may crack or delaminate with age depending on joint movement. Refer to Sto Tech Hotline No. 0210-C.

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LIMITATIONS

- Apply only when surface and ambient temperatures are between 32 (0°C) and rising and 100°F (38°C) during application and curing period.
- Do not apply if the surface temperature is less than 5°F (2.8°C) above the ambient dew point temperature.
- Do not use on surfaces with standing water or frost.
- Do not use below grade or on surfaces subject to in-service water immersion.
- Do not use in direct contact with fire or in long term high-temperature applications
- Do not use for glazing applications
- Do not use over special architectural finishes without proper testing
- Do not use to seal joints less than ½ inch (13mm) or greater than 1-1/4-in (32mm) in width
- Allowable in-service temperature range: -40 to 158°F (-40 to 70°C).
- Compatibility with other substrates: always verify adhesion with lab or field tests under actual conditions of use
- Some coated metals or anodized aluminum surfaces require priming. Conduct adhesion tests to verify.
- Fire-retardant or pressure treated plywood must be dry with surface free of salts or other chemicals migrating from within the wood. Test adhesion to be sure of desired results.
- Do not apply Sto textured finishes over StoSeal STPE Sealant.
- Do not use 3M™ All Purpose Primer P591 over Sto RapidGuard®
- Paints/coatings installed over StoSeal STPE Sealant may crack or delaminate with age depending on joint movement

LIMITED WARRANTY

This product is subject to a written limited warranty which can be obtained free of charge from Sto Corp.

HEALTH & SAFETY

DANGER!

May damage the fertility or the unborn child.

Health Precautions

Breathing large amounts of vapor may be harmful. Can cause eye or throat irritation. Symptoms include redness and burning of skin. Swallowing large amounts may be harmful. If irritation persists consult a physician.

Safety Precautions

Use adequate ventilation. Safety goggles and protective gloves are recommended. Remove contaminated clothing immediately.

First Aid

SKIN CONTACT: Remove contaminated clothing and shoes. Use a waterless hand cleaner to remove as much material as possible. Wash with soap and water. Wash clothing and decontaminate shoes before re-use. Get medical attention if irritation develops and persists. Avoid repeated, prolonged contact with skin.

EYE CONTACT: Do not attempt to remove solids or gums from the eye. Immediately rinse eyes with lukewarm gently flowing water for 20 minutes, holding the eyelids open. After 5 minutes, remove contact lenses, if present and possible, and continue rinsing. Get medical attention immediately.

RESPIRATORY PROBLEMS: Remove from area to fresh air. If not breathing clear airway, start mouth-to-mouth artificial respiration or use a bag mask respirator. Get immediate medical attention. If victim is having trouble breathing, transport to medical care and, if available, give supplemental oxygen.

INGESTION: DO NOT induce vomiting. DO NOT give anything by mouth to an unconscious or convulsing person. Have victim rinse out mouth and drink 8-10 oz (240-300 ml) of water to dilute the material in stomach. Get immediate medical attention.

HYGIENE: Wash hands immediately after use. Wash clothing before re-use.

Spills

Collect with suitable absorbent material such as cotton rags.

Disposal

Dispose of in accordance with local, state or federal regulations.

Warning

KEEP CONTAINER CLOSED WHEN NOT IN USE. KEEP OUT OF THE REACH OF CHILDREN. NOT FOR INTERNAL CONSUMPTION. FOR INDUSTRIAL USE ONLY. Consult the Safety Data Sheet (SDS) for further health and safety information. Safety Data Sheet (SDS) is available at www.stocorp.com.

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TECHNICAL DATA

REPORT	TEST METHOD	TEST CRITERIA	TEST RESULT*
Elongation	Lab Method	Report Results	≥ 600%
Movement Capability	ASTM C920 / C719	1-1/2 in ² (9.7cm ²) maximum total bond loss	Unprimed Glass: No (< 1/8-in ²) bond loss Unprimed Aluminum: No (< 1/8-in ²) bond loss Unprimed Mortar: (1.01-in ²) bond loss Primed Mortar: No (< 1/8-in ²) bond loss, Meets requirement
Flow Characteristics	ASTM C920 / C639	Sag ≤ 3/16-in (4.8mm) in vertical displacement, no sag horizontally	Less than 1.0mm, Meets requirements for Grade NS (non-sag)
Extrusion Rate	ASTM C920 / C1183, Procedure A	≥ 10 mL/min	Standard Temperature: 30ml/min 40°F (4°C): 18ml/Min Meets requirement
Hardness – Shore A	ASTM C920 / C661	> 25 and < 50	46, Meets requirement
Effects of Heat Aging	ASTM C920 / C1246	≤ 7% weight loss, no cracking or chalking	Weight loss: 3.4%, No cracking or chalking, meets requirement
Tack-Free Time by Touch	ASTM C920 / C679	No transfer of sealant to polyethylene film at ≤ 72h	90 minutes at 71°F (21.7°C) and 59% RH, meets requirement
	ASTM C920 / C510	No visible staining on white cement mortar	No visible stain, Meets requirement
Adhesion and Cohesion Under Cyclic Movement	ASTM C920 / C719	≤ 1-1/2-in ² (9 cm ²) loss in bond and cohesion to mortar, glass, and aluminum	Meets requirement
Adhesion-in-Peel after UV Exposure	ASTM C920 / C794	≥ 5 lbf (22.5 N) and ≤ 25% bond loss to mortar, glass, and aluminum, after 250 hours UV exposure through glass	Unprimed Glass: 12.3 lbf (55N), < 8% bond loss Unprimed Aluminum: 11.2 lbf (50N), < 10% bond loss Unprimed Mortar: 9.0 lbf (40N), < 10% bond loss Primed Mortar: 12.1 lbf (54N), < 6% bond loss Meets requirement
Adhesion-in-Peel	ASTM C920 / C794	≥ 5 lbf (22.5 N) and ≤ 25% bond loss to mortar, glass, and aluminum	Unprimed Glass: 13.8 lbf (61N), < 6% bond loss Unprimed Aluminum: 12.6 lbf (56N), < 8% bond loss Unprimed Mortar: 10.0 lbf (44N), < 8% bond loss Primed Mortar: 13.4 lbf (59N), < 4% bond loss Meets requirement
VOC Content	EPA Method 24	Report results	8g/L
Compliance or Tested in Accordance with	<ul style="list-style-type: none">Complies with ASTM C920, Type S, Grade NS, Class 100 Uses NT, A, MFederal Spec. TT-S-00230C Type IIAAMA 808.3 (Type1) Exterior Perimeter SealingASTM C1382 for use with EIFS		
*Results are based on lab testing under controlled conditions. Results can vary between labs or from field tests.			

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ATTENTION

This product is intended for use by qualified professional contractors, not consumers, as a component of a larger construction assembly as specified by a qualified design professional, general contractor or builder. It should be installed in accordance with those specifications and Sto's instructions. Sto Corp. disclaims all, and assumes no, liability for on-site inspections, for its products applied improperly, or by unqualified persons or entities, or as part of an improperly designed or constructed building, for the nonperformance of adjacent building components or assemblies, or for other construction activities beyond Sto's control. Improper use of this product or use as part of an improperly designed or constructed larger assembly or building may result in serious damage to this product, and to the structure of the building or its components. **STO CORP. DISCLAIMS ALL WARRANTIES EXPRESSED OR IMPLIED EXCEPT FOR EXPLICIT LIMITED WRITTEN WARRANTIES ISSUED TO AND ACCEPTED BY BUILDING OWNERS IN ACCORDANCE WITH STO'S WARRANTY PROGRAMS WHICH ARE SUBJECT TO CHANGE FROM TIME TO TIME.** For the fullest, most current information on proper application, clean-up, mixing and other specifications and warranties, cautions and disclaimers, please refer to the Sto Corp. website, www.stocorp.com