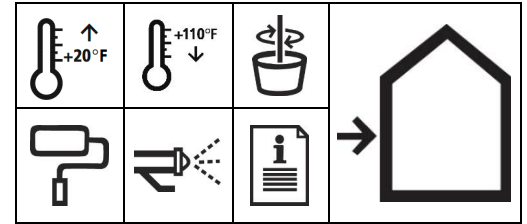


PRODUCT BULLETIN

Sto GoldSeal™ STPE

Product Number: 81838



PRODUCT DESCRIPTION

Sto Gold Seal STPE is a vapor permeable fluid-applied air barrier and water-resistive barrier (AWRB) for use over glass mat gypsum sheathing, wood-based sheathing, cementitious sheathing, concrete, and concrete masonry wall construction.

FEATURES	BENEFITS
STPE chemistry	Damp substrate tolerant, withstands rainfall shortly after installation
Opaque at minimum specified thickness	Hides sheathing logos and other markings for improved quality control
Vapor Permeable	Minimizes risk of condensation in walls
Fully bonded and durable	Stable under air pressure loads; does not tear or blow off the wall in windy exposures
Low viscosity	Easy, fast roller or spray installation
Thixotropic	Resists sagging on vertical walls
Greater than 98% solids	High coverage

Packaging

5 gallon (19L) pail

Coverage (per pail)

250-500 ft² (4.6-9.3m²)

Coverage will vary depending on substrate, application technique, waste factor, and other variables that may exist. Construct a mock-up under actual conditions of use to verify coverage and for approval by the appropriate authority.

Shelf Life

9 months in original, unopened, properly stored container.

Storage

Store in tightly sealed container in a cool, dry area. Protect from heat [$\geq 90^{\circ}\text{F}$ (32°C)], freezing, direct sunlight and moisture. Once container is opened use full contents (re-applying the lid to the pail and re-storing will result in a heavy skin being formed on the surface of the material).

SURFACE PREPARATION

All substrates must be installed in accordance with applicable code requirements and manufacturer's recommendations.

Sheathing: must be Exterior Grade or Exposure 1 wood-based sheathing, ASTM C1177 compliant glass mat gypsum sheathing or ASTM C1325 Type A cementitious sheathing. Sheathing surfaces must be structurally sound, clean, dry, and free of all bond-inhibiting materials, including dirt, dust, frost, and other foreign matter. Treat sheathing joints, inside and outside corners, rough openings, and transition details with appropriate StoGuard® Detail Components. Refer to Sto Details and applicable Product Bulletins. Pre-treat vacant fastener holes and over-driven fasteners with Sto RapidGuard®.

Concrete: must be fully cured, structurally sound, clean, dry, and free of frost, damage, and all bond-inhibiting materials, including dirt, dust, grease, efflorescence, form oil, curing compounds, paints or coatings, salts, laitance, or other surface conditions that could interfere with adhesion. Form ties must be removed. Surface defects such as spalls or honeycombs must be repaired (Refer to Sto repair product bulletins: Sto Wall Leveler and Patch or Sto Leveler and Skim Coat).

Concrete Masonry: must be fully cured, structurally sound, clean, dry, and free of frost, damage, and all bond-inhibiting materials, including dirt, dust, grease, efflorescence, paints or coatings, salts, laitance, or other surface conditions that could interfere with adhesion. Provide masonry units with flush joints and free of surface defects. Projecting mortar must be removed so it is even with the plane of the wall.

AWRB DETAILING

Before installing the primary AWRB, make sure all details at joints, seams, openings, penetrations, fixture attachments, connections to dissimilar materials, transitions at foundation, floor lines, and roof/wall interfaces are detailed with the appropriate StoGuard Detail components for air barrier continuity and resistance to water penetration. Refer to Sto Design Guide and Detail Booklets and applicable Sto Product Bulletins at www.stocorp.com

MIXING

Mix to a uniform consistency with a low-speed electric drill and clean, rust-free Jiffy mixer for 1 minute. Do not thin or dilute with water.

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APPLICATION

Provide adequate ventilation and ensure surface and ambient temperatures are between 20°F and rising and 110°F (-6.7 and 43°C) during application and curing period. For spray applications temperatures must be above 60°F (15.6°C) and rising.

Hot Weather Conditions (greater than 95°F [35°C]): Keep materials cool and in shade before and during application. Apply to shaded wall surfaces and before peak daytime temperatures occur.

Cold Weather Conditions (less than 50°F [10°C]): Keep materials warm before and during application. Temperatures must be above 32°F (0°C) for product to cure.

Apply only to structurally sound, clean, dry, properly prepared frost-free surfaces. Protect adjacent surfaces and property – vehicles, landscaping, structures – from roller or spray application.

Generally, a single coat application will cover smooth substrates such as plywood and glass mat gypsum sheathing. "Rough" substrates such as OSB and CMU generally require two coats to achieve a VOID and PINHOLE free surface.

Roller Application: apply to the prepared substrate using a ½ or ¾ inch (13 or 19mm) nap roller at 15-20 WFT to achieve a VOID and PINHOLE free surface.

Spray Application: remove all filters from the equipment prior to spraying and ensure tips, hoses and sprayer have been thoroughly flushed with mineral spirits. Use Graco 675, 833, or 993 Direct Immersion Sprayer with 523 or 621 reversible tip at a minimum pressure setting of 4000 psi (27.6 MPa) and minimum 3200 psi (22.1 MPa) at the tip. Use ½ inch (13mm) inside diameter hose suitable for minimum 4000 psi (27.6 MPa) pressure and HD Blue 241706 Gun with 3/8 inch (9.5mm) whip and gun swivel. Spray continuously in a cross-hatch spray pattern with the spray gun 12-18 inches (305 – 457mm) from the surface. Flush equipment after each use with mineral spirits. Failure to do so could result in damaged equipment. Apply uniformly in one coat at 15-20 mils WFT to achieve a VOID and PINHOLE free surface.

Other sprayers and equipment may be used at the discretion of the contractor based on his/her experience to achieve desired results. Pressure and tip size may vary depending on equipment used.

IMPORTANT: DO NOT ALLOW WATER IN THE PUMP OR LINES, AS THE PRODUCT WILL REACT (CURE) WITH WATER. DO NOT ALLOW MATERIAL TO STAND IDLE IN THE SPRAYER.

Curing

Temperatures must be above 32°F (0°C) for product to cure. The product cures with moisture in the atmosphere and within the substrate. The product skins within 60 minutes and dries within 12 hours when applied at 15 mils WFT at normal conditions [70°F (21°C), 50% RH] and cures within 7 days. Cool and/or low humidity conditions delay curing. Hot and/or high humidity conditions accelerate curing. Final cure time will vary depending on temperature/humidity, thickness of application, and surface conditions. Protect from driving rains and temperatures less than 20°F (-6.7°C) until completely dry. **IMPORTANT: IF TEMPORARY HEATERS ARE USED, VENTILATE TO THE EXTERIOR TO PREVENT WATER VAPOR FROM CONDENSING ON OR WITHIN THE WALL SECTION.**

Clean Up: clean tools and equipment with mineral spirits immediately after use. Dried material can only be removed mechanically. Exercise care when handling cleansing agents and follow precautions on packaging.

LIMITATIONS

- Apply only when surface and ambient temperatures are between 20°F and rising and 110°F (-6.7 and 43°C) during application and drying period.
- Do not use on surfaces with standing water or frost.
- Do not use on surfaces that will be below grade or subject to in-service water immersion.
- Do not use in place of appropriate through wall flashing.
- Allowable weather exposure: 6 months, 90 days for adhesively fastened StoTherm ci Systems.
- Allowable in-service temperature range: -40 to 158°F (-40 to 70°C).
- Compatibility with other substrates or sealants: always verify adhesion with lab or field tests under actual conditions of use.
- 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.
- Exercise care when mechanically attaching wall assembly components through the AWRB so that fasteners go into (not between) framing supports. Do not use powder actuated or other fastening devices that can damage the substrate or AWRB. Seal all penetrations through the wall to make them watertight. Test assemblies to verify watertightness.

PRODUCT BULLETIN

Sto GoldSeal™ STPE

Product Number: 81838

LIMITATIONS (continued)

- Not permitted for use in StoTherm ci Mineral.
- Use on Noncombustible Construction:
 - StoTherm®ci Systems: use only Sto TurboStick adhesives to attach insulation boards. Sto Lamella fireblocking is required at the head of openings. Refer to Sto details. Sto EPS and Sto GPS insulation are limited to a maximum of 4 inches (102mm) thick and XPS insulation is limited to a maximum of 2 inches (51mm) thick.
 - Not for use in StoPowerwall® ci and StoPowerwall ci (Inbound) Systems
 - StoVentec® Glass, Render, and MVF Systems: minimum 2-inch (51mm) thick, minimum 4 pcf (64 kg/m³) density continuous mineral wool insulation is required over the Sto AWRB.
 - StoQuik® Silver DrainScreen®: limited to walls that are less than or equal to 40 ft (12.2m) in height above grade plane.
 - Other Claddings: use is limited to walls that are less than or equal to 40 ft (12.2m) in height above grade plane, unless the Sto AWRB is the only combustible component in the wall assembly, and the wall covering is StoVentec Fiber Cement, brick, concrete, stone, terra cotta, stucco or steel with minimum thickness as specified in the code (refer to 2021 IBC Section 1402.5 and Table 1404.2).
- Use on Combustible Construction:
 - Limited to heights permitted by the applicable building code.
 - StoTherm ci Systems: Sto EPS and Sto GPS insulation are limited to a maximum of 4 inches (102mm) thick and XPS insulation is limited to a maximum of 2 inches (51mm) thick.
 - StoPowerwall ci Systems limited to 3 inch (76mm) maximum insulation board thickness.

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 irritation. Symptoms include redness and burning of skin. Swallowing large amounts may be harmful.

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.

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 ¹
%Solids (by volume)	Calculation	N/A	>98%
VOC	Calculation	< 50 g/L	24.1 g/L
Skin Time	Lab Method	70°F (21°C) and 50% RH	60 minutes
Color	N/A	N/A	Yellow
Air Leakage Resistance	ASTM E2178	< 0.02 L/s•m ² •s @ 75 Pa (<0.004 cfm/ft ²) @ 1.57 psf	Pass
Water Vapor Permeability	ASTM E96, Method B	Measure	> 10 perms (572 ng/Pa•s•m ²)
Surface Burning	ASTM E84	Flame Spread: ≤ 25 Smoke Developed: ≤ 450	Flame Spread: 10 Smoke Developed: 10
Elongation	ASTM D412	Measure	> 300 % at 25 DFT
Tensile Strength	ASTM D412	Measure	> 100 psi (6.89 kPa) at 25 DFT
Adhesion to Substrates	ASTM E2570/C297	> 15 psi (103 kPa)	> 15 psi (105 kPa) over glass mat gypsum sheathing, concrete, OSB & plywood sheathing
Nail Sealability	ASTM D1970	No water penetration after 72 hours at 40°F (4°C)	No water penetration at 25 DFT
Water Resistance	ASTM D2247	No deleterious effects ² at 14 days	No deleterious effects ² at 14 days
Low Temperature Crack Bridging	ASTM C1305	No cracking after 10 cycles of 1/8-in (3mm) extension and closure at -15°F (-26°C)	No cracking at 25 DFT
Freeze/Thaw Resistance	ASTM E2485	No deleterious effects ² at 10 cycles	No deleterious effects ² at 10 cycles
Accelerated Weathering/ Hydrostatic Pressure	ASTM E2570/ AATCC 127 (modified)	No cracking of the coating or bond failure, no water penetration after cyclic weathering & 5 hour water column (21.5 in [55 cm])	No cracking or bond failure
Structural, Racking, Restrained Environmental Conditioning, and Resistance to Water Penetration	ICC AC 212, Section 4.7	No cracking in the field of the panel, at substrate joints, and at the interface with flashing, no water penetration	No cracking, no water penetration
Air Leakage of Air Barrier Assembly	ASTM E2357	< 0.2 L/s•m ² @ 75 Pa (< 0.04 cfm/ft ² @ 1.57 psf)	Pass
Fire Performance of Assembly	NFPA 285	Comply with acceptance criteria	Complies (see below)
Building Code Compliance)	<ul style="list-style-type: none">• Meets requirements of 2021 IBC, IRC, and IECC as an air barrier material• Complies with requirements of ICC AC212 and ASTM E2570 as a water-resistive barrier (WRB)• Class A Building Material.• Meets requirements for use on noncombustible construction as a component of:<ul style="list-style-type: none">• StoTherm® ci (with up to 4 inches [102mm]) of Sto EPS or Sto GPS insulation and fireblocking at head of openings)• StoPowerwall®, StoPowerwall® MVES,• StoPowerwall® DrainScreen®, StoPowerwall® DrainScreen® MVES• StoVentec® ventilated rainscreen wall systems (with minimum 2-inch [51mm] continuous mineral wool insulation)• Other Claddings: refer to limitations		
VOC Compliance	This product complies with US EPA (40 CFR 59) and South Coast AQMD (Rule 1113) VOC emission standards for Building Envelope Coating. VOC less than 50 g/L.		
1. Results are based on lab tests under controlled conditions. Results can vary between labs or from field tests. 2. No deleterious effects: no cracking, checking, crazing, erosion, or other characteristics that may affect performance as a WRB, or delamination.			

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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