

StoGuard® VaporSeal™

80263 StoGuard® VaporSeal™
High Build Vapor Barrier, Air Barrier, WRB



Technical Data			
REPORT	TEST METHOD	TEST CRITERIA	TEST RESULTS
Low Temperature Crack Bridging	ASTM C1305	No cracking after 10 cycles at -15°F (-26°C)	Pass
Elongation	ASTM D412	Measure	> 500%
Tensile Strength	ASTM D412	Measure	> 200 psi (1378 kPa)
Nail Sealability	ASTM D1970	No leakage	Pass
Resistance to Mold Growth	ASTM D3273	No growth at 30 days	Rating = 10 (no growth) at 90 days
Adhesion to Substrates	ASTM D4541	≥ 15 psi (103 kPa)	> 15 psi (103 kPa) over Glass Mat Gypsum > 50 psi (344 kPa) over concrete, OSB & plywood
Water Vapor Permeance	ASTM E96 Method A	< 0.1 perms (5.7 ng/Pa·s·m²)	0.06 US perms (3.43 ng/Pa·s·m²)
Air Leakage	ASTM E2178	< 0.02 L/m²·s @ 75 Pa (0.004 cfm/ft² @ 1.57 psf)	Pass*
Air Leakage of Air Barrier Assembly	ASTM E2357	< 0.2 L/s·m² at 75 Pa (< 0.04 cfm/ft² at 1.57 psf)	Pass**
Flame Propagation	NFPA 285	Comply with acceptance criteria of NFPA 285	Pass
%Solids (by volume)	Calculation	N/A	50%
Color	N/A	N/A	Grey/Blue
VOC Compliance	Complies with US EPA (40 CFR 59) and South Coast AQMD (Rule 1113) VOC emission standards for waterproofing sealer, VOC < 100 g/L		
Building Code Compliance	Meets requirements of 2015 IBC, IRC, and IECC as an air barrier, Class I vapor retarder, and water-resistive barrier. Meets requirements of NFPA 285 for use on Types I-IV construction for buildings of any height. Refer to Jensen Hughes analysis: 1JJB05184.001		
Green Building Standards and Code Conformance	Meets CALGreen, Title 24, requirements for air barriers and WRBs Meets IgCC requirements for air barriers Meets ICC <i>National Green Building Standard</i> requirements for WRBs Meets ASHRAE 189.1 requirements for air barriers		

Results are based on lab testing under controlled conditions. Results can vary between labs or from field tests.

* Based on tests performed with thin film coating

** Based on tests performed with joint treatment only and no air barrier top coat

Features	Benefits
1 Waterproof material	Minimizes risk of water damage
2 Vapor barrier	Effectively retards water vapor diffusion in walls
3 Structural and durable	Rigid and stable under air pressure loads; does not tear or blow off the wall with wind
4 Spray applied with airless spray equipment	Easy, fast installation; does not require specialized spray equipment
5 Water-based and low VOC	Safe, VOC compliant, easy clean-up, improved IAQ
6 Compatible with other StoGuard Products	Reliability and peace of mind

StoGuard® VaporSeal™ is a fluid-applied air barrier, vapor barrier, and water-resistive barrier (WRB). It is used over prepared vertical above grade concrete, concrete masonry, brick masonry, and wood or glass mat gypsum sheathing walls. It can be used behind multiple claddings such as metal panels, stone and brick veneer with a cavity, stucco or adhered masonry veneer over metal lath, and wood, vinyl or fiber cement sidings.

Coverage

Approximately 70-90 ft² (6.5-8.4 m²) per pail when applied at 80 wet mils (40 mils DFT)

Coverage may vary depending on substrate conditions, application technique, waste factor, and final film thickness. CMU substrates will generally be on the lower end of the coverage range.

Construct a mock-up under actual conditions of use to verify proper surface preparation, number of coats required, coverage, and method of application, for approval by the appropriate authority.

Packaging

5 gallon (19 L) pail.

Shelf Life

18 months, if properly stored and sealed.

Storage

Store in a cool, dry area.

Protect from extreme heat [90°F (32°C)], freezing, and direct sunlight.

StoGuard® VaporSeal™

Surface Preparation

Surfaces must be fully cured, structurally sound, clean, dry, and free of frost, damage, and all bond-inhibiting materials, including dirt, dust, efflorescence, form oil, and other foreign matter. Sheathing must be Exterior Grade or Exposure 1 wood-based sheathing or building code compliant glass mat gypsum sheathing. Sheathing must be installed in compliance with the building code and manufacturer's recommendations. Treat sheathing joints, inside and outside corners, rough openings, and transition details with appropriate

StoGuard components. Refer to Sto Details. Pre-treat surface defects such as knots in wood-based sheathing, vacant fastener holes, and minor cracks (up to 1/16 inch [1.6 mm] wide) in concrete and CMU with StoGuard VaporSeal. If cracks are structural consult an engineer. Note: for fast drying in cold or damp weather use Sto Rapid products for detailing and pre-treatments. Apply StoGuard VaporSeal over the Rapid products within 48 hours of their drying.

Mixing

Mix to a uniform consistency with an electric drill and clean, rust-free paddle.

Do not thin or dilute with water.

Application

Provide adequate ventilation and ensure surface and ambient temperatures are between 40°F and 100°F (4°C and 38°C) during application and drying period. Apply only to fully cured, structurally sound, clean, dry, properly prepared, frost-free surfaces.

Spray Application

Apply to the prepared substrate using airless spray equipment that pumps a minimum of 1-1/4 to 1-1/2 gallons (4.7-5.7 L) per minute. Suggested tip size is .025. Pressure and tip size may vary depending on equipment used. Spray uniformly at a thickness of approximately 40 wet mils, allow material to set slightly (up to 1 hour depending on weather and substrate conditions), and double back with a second pass to achieve a total of 80 wet mils (40 DFT). Alternatively, apply in two coats, allowing the first coat to fully dry. CMU surfaces may require back rolling of the first pass with a ¾ or 1 inch (19 or 25 mm) synthetic nap roller depending on porosity, joint profile, trueness of the wall surface, and other variables that may exist. Avoid excess build-up of wet material to prevent sag, especially on non-porous surfaces and during cold or damp weather.

Roller Application

The product may be applied by roller or brush at detail areas such as treatment of sheathing joints and rough openings with StoGuard Fabric. Use a ¾ inch (19 mm) synthetic nap roller and apply liberally to embed the fabric.

Drying

Product dries within 24 hours under normal drying conditions [70°F (21°C), 50% RH]. Final dry time varies depending on temperature/humidity, thickness of application, and surface conditions. Cold weather and/or damp conditions prolong drying and may require adjustments in application method to prevent sag. Protect from rain and freezing until completely dry. If temporary heaters are used ventilate to the exterior to prevent water vapor from accumulating on or within the wall assembly components.

Clean Up

Clean tools and equipment with water immediately after use. Dried material can only be removed mechanically.

Limitations

- Apply only when surface and ambient temperatures are between 40°F and 100°F (4°C and 38°C) during application and drying 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 below grade or on surfaces subject to in-service water immersion
- Allowable weather exposure before protection with cladding: 90 days
- Allowable in-service temperature range: -40°F to 180°F (-40°C to 82°C)
- Fire-retardant treated or pressure treated plywood substrates must be dry with the surface free of salts or other chemical treatments migrating from within the wood. Test adhesion to be sure of desired results.
- Use a slip sheet (typically one layer of building paper or Sto DrainScreen™ and building paper) between StoGuard VaporSeal and stucco or adhered masonry veneer over metal lath. Refer to Sto Details.
- Interior applications: a 15 minute thermal barrier may be required over StoGuard VaporSeal. Consult local codes.

Health And Safety

Health Precautions

WARNING!

May cause eye and/or skin irritation.

Safety Precautions

Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

First Aid: Eye Contact: Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.

Skin Contact: Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

Ingestion: If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Store locked up.

Spills: Dry stage: Sweep and dispose of in proper receptacle. Wet stage: Add absorbent, sweep up and discard. Keep out of sewers and other public water systems.

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 on www.stocorp.com or by calling 1-800-221-2397 for further health and safety information.

LIMITED WARRANTY

This product is subject to a written limited warranty which can be obtained free of charge from Sto Corp. Refer to *Sto Guide Specifications and Details* for more complete information on proper use and handling of this product.

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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.