

# Sto AirSeal™

81210 Sto AirSeal™

Fluid-applied, High Build Vapor Permeable Air Barrier, WRB



Technical Data			
REPORT	TEST METHOD	TEST CRITERIA	TEST RESULTS
Water Column	AATCC 127 (modified)	No leakage @ 5 hours	Pass
Low Temperature Crack Bridging	ASTM C1305	No cracking after 10 cycles at -15°F (-26°C)	Pass
Elongation	ASTM D412	Measure	> 500% at 40 mils DFT > 450% at 30 mils DFT > 300% at 12 mils DFT
Tensile Strength	ASTM D412	Measure	> 15 psi
Resistance to Mold	ASTM D3273	No growth at 30 days	Rating = 10 (no growth) at 70 days
Adhesion to Substrates	ASTM D4541	≥ 15 psi (103 kPa)	> 15 psi (103 kPa) over glass mat gypsum > 50 psi (344 kPa) over CMU, OSB & plywood
Surface Burning	ASTM E84	Flame Spread: ≤ 25 Smoke Developed: ≤ 450	Flame Spread: < 25 Smoke Developed: < 100
Water Vapor Permeance	ASTM E96 Method B	Measure	> 12 perms at 40 DFT (689 ng/Pa·s·m <sup>2</sup> )
Air Leakage	ASTM E2178	< 0.02 L/m <sup>2</sup> ·s @ 75 Pa (<0.004 cfm/ft <sup>2</sup> @ 1.57 psf)	Pass
Air Leakage of Air Barrier Assembly	ASTM E2357	< 0.2 L/s·m <sup>2</sup> at 75 Pa (< 0.04 cfm/ft <sup>2</sup> at 1.57 psf)	Pass*
%Solids (by volume)	Calculation	N/A	61%
Color	N/A	N/A	Teal
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	<ul style="list-style-type: none"> <li>Meets requirements of 2015 IBC, IRC, and IECC as an air barrier and water-resistive barrier, ICC AC 212 and ASTM E 2570</li> <li>Meets requirements of NFPA 285 for use on Types I-IV construction for buildings of any height (some cladding restrictions apply-refer to Sto Corp NFPA 285 directory)</li> </ul>		
Green Building Standards and Code Conformance	<ul style="list-style-type: none"> <li>2016 CALGreen, Title 24, requirements for air barriers and WRBs</li> <li>2015 IgCC requirements for air barriers</li> <li>2015 ICC National Green Building Standard requirements for WRBs</li> <li>2014 ASHRAE 189.1 requirements for air barriers</li> </ul>		

Sto AirSeal™ is a fluid-applied vapor permeable air barrier and water-resistive barrier (WRB). It is used over prepared vertical above grade concrete, concrete masonry, brick masonry, wood and glass mat gypsum sheathing walls. It can be used behind StoTherm® ci and other 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 siding.

### Approximate Coverage

90-110 ft<sup>2</sup> (8.4 – 10.2 m<sup>2</sup>) per pail when applied at 66 wet mils (40 mil DFT).

130 -150 ft<sup>2</sup> (12.1 – 14.0 m<sup>2</sup>) when applied at 50 wet mils (30 mil DFT).

320 -380 ft<sup>2</sup> (30.0 – 35.3 m<sup>2</sup>) when applied at 20 wet mils (12 mil 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

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

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

Features	Benefits
1 Waterproof material	Minimizes risk of water damage
2 Vapor Permeable	Minimizes risk of condensation 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



## Product Bulletin

# Sto AirSeal™

### 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 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 Sto AirSeal. 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 Sto AirSeal 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.

of wet material to prevent sag, especially on non-porous surfaces and during cold or damp weather.

#### Spray Application

Apply Sto AirSeal to the prepared substrate using airless spray equipment that pumps a minimum 1 gallon (3.8 L) per minute. Suggested tip size is .029. Pressure and tip size may vary depending on equipment used. Spray uniformly at thickness of approximately:

- 20 wet mils to achieve minimum 12 mil DFT for StoTherm ci (EIFS)
- 50 wet mils to achieve minimum 30 mil DFT for other cladding
- 66 wet mils where 40 mil DFT is specified.

If necessary, allow material to set slightly (up to 1 hour depending on weather and substrate conditions), and double back with a second pass to achieve total thickness. 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

#### Roller Application

Roller application is recommended at detail areas such as treatment of sheathing joints and rough openings with StoGuard Fabric. Sto AirSeal may also be applied by roller for StoTherm ci (EIFS) to achieve 20 wet mils (12 mil DFT). Airless spray is recommended for thicker applications. If applying by roller multiple applications may be needed. Use a ¾ inch (19 mm) synthetic nap roller and apply liberally.

#### Drying

Product dries in 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. 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: 180 days, 90 days for StoTherm ci cladding.
- Allowable in-service temperature range: -40°F to 180°F (-40°C to 82°C)
- 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.
- Use a slip sheet (typically one layer of building paper or Sto DrainScreen™ and building paper) between Sto AirSeal and stucco or adhered masonry veneer over metal lath.

### 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](http://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.

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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](http://www.stocorp.com).