**Sto AirSeal®**

81646-301 Sto AirSeal® - Black
81646-302 Sto AirSeal® - Charcoal

Fluid-applied, high build vapor permeable air and moisture barrier (AMB)

<table>
<thead>
<tr>
<th>Technical Data</th>
<th>REPORT</th>
<th>TEST METHOD</th>
<th>TEST CRITERIA</th>
<th>TEST RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Penetration Resistance</td>
<td>AAMA 509</td>
<td>Voluntary Classification</td>
<td>Classification: W1 in StoVentec systems</td>
<td></td>
</tr>
<tr>
<td>Water Column</td>
<td>AATCC 127 (modified)</td>
<td>No leakage @ 5 hours</td>
<td>Pass</td>
<td></td>
</tr>
<tr>
<td>Low Temperature Crack Bridging</td>
<td>ASTM C1305</td>
<td>No cracking after 10 cycles at -15°F (-26°C)</td>
<td>Pass</td>
<td></td>
</tr>
<tr>
<td>Elongation</td>
<td>ASTM D412</td>
<td>Measure</td>
<td>&gt; 500% @ 40 mils DFT &gt; 450% @ 30 mils DFT</td>
<td></td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>ASTM D412</td>
<td>Measure</td>
<td>&gt; 15 psi</td>
<td></td>
</tr>
<tr>
<td>Resistance to Mold</td>
<td>ASTM D3273</td>
<td>No growth at 30 days</td>
<td>Rating = 10 (no growth) at 70 days</td>
<td></td>
</tr>
<tr>
<td>Adhesion to Substrates</td>
<td>ASTM D4541</td>
<td>≥ 15 psi (103 kPa)</td>
<td>&gt; 15 psi (103 kPa) over glass mat gypsum &gt; 50 psi (344 kPa) over CMU, OSB &amp; plywood</td>
<td></td>
</tr>
<tr>
<td>Surface Burning</td>
<td>ASTM E84</td>
<td>Flame Spread: &lt; 25 Smoke Developed: ≤ 450</td>
<td>Flame Spread: &lt; 25 Smoke Developed: &lt; 450</td>
<td></td>
</tr>
<tr>
<td>Water Vapor Permeance</td>
<td>ASTM E96 Method B</td>
<td>Measure</td>
<td>&gt; 12 perms at 40 DFT (689 ng/Pa·s·m²)</td>
<td></td>
</tr>
<tr>
<td>Air Leakage</td>
<td>ASTM E2178</td>
<td>&lt; 0.02 L/m²·s @ 75 Pa (&lt;0.004 cfm/ft² @ 1.57 psf)</td>
<td>Pass</td>
<td></td>
</tr>
<tr>
<td>Air Leakage of Air Barrier Assembly</td>
<td>ASTM E2357</td>
<td>&lt; 0.2 L/s·m² at 75 Pa (&lt; 0.04 cfm/ft² at 1.57 psf)</td>
<td>Pass*</td>
<td></td>
</tr>
<tr>
<td>%Solids (by volume)</td>
<td>Calculation</td>
<td>N/A</td>
<td>61%</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>N/A</td>
<td>N/A</td>
<td>Black or Charcoal</td>
<td></td>
</tr>
<tr>
<td>VOC Compliance</td>
<td></td>
<td>Complies with US EPA (40 CFR 59) and South Coast AQMD (Rule 1113) VOC emission standards for Building Envelope Coating. VOC &lt; 50 g/L</td>
<td></td>
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</tbody>
</table>

**Building Code Compliance**

- Meets requirements of 2018 IBC, IRC, and IECC as an air barrier and water-resistive barrier, ICC AC 212 and ASTM E 2570
- Meets requirements of NFPA 285 for use on Types I-IV construction when used in StoVentec rainscreen systems, refer to Intertek Design Listings STO-CWP 30-01 and STO-CWP 30-02
- Meets requirements of NFPA 285 for use on Types I-IV construction for multiple wall assemblies, refer to IGC-ESR 1233

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**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Waterproof material</td>
<td>Minimizes risk of water damage</td>
</tr>
<tr>
<td>2. Vapor Permeable</td>
<td>Minimizes risk of condensation in walls</td>
</tr>
<tr>
<td>3. Structural and durable</td>
<td>Rigid and stable under air pressure loads; does not tear or blow off the wall with wind</td>
</tr>
<tr>
<td>4. Spray applied with airless spray equipment</td>
<td>Easy, fast installation; does not require specialized spray equipment</td>
</tr>
<tr>
<td>5. Water-based and low VOC</td>
<td>Safe, VOC compliant, easy clean-up, improved IAQ</td>
</tr>
<tr>
<td>6. Compatible with other StoGuard Products</td>
<td>Reliability and peace of mind</td>
</tr>
</tbody>
</table>

**Sto AirSeal®** is a fluid-applied vapor permeable air and moisture barrier (AMB) for use behind StoVentec®, RainScreen®, StoTherm®, StoPowerwall®, StoQuik® Silver and other wall claddings such as masonry, stone, stucco, and fiber cement. It is used over prepared vertical above grade wall substrates such as concrete, concrete masonry, and glass mat gypsum, plywood, or OSB sheathing

**Approximate Coverage**

85-105 ft² (7.9 – 9.8 m²) per gallon when applied at 66 wet mils (40 mil DFT).

125 - 145 ft² (11.6 – 13.5 m²) when applied at 50 wet mils (30 mil DFT).

Coverage may vary depending on substrate conditions, application technique, waste factor, and final film thickness. Refer to Sto Tech Hotline No. 06-14-BSc for information on glass mat gypsum sheathing substrates. 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.

**Color**

Black and Charcoal.

**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.
### Surface Preparation

Use only over code compliant above grade wall construction. Brick Veneer Wall Assemblies; provide cavity wall construction. Stucco Wall Assemblies; provide a WRB slip sheet between the AMB and stucco. Ensure all attachment penetrations through the AMB go into structural support members and are adequately sealed. Refer to StoGuard® guide details. Avoid the use of powder actuated fasteners and other tools that can damage the AMB. 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.

<table>
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<tr>
<th>Mixing</th>
<th>Application</th>
</tr>
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<tr>
<td>Mix to a uniform consistency with an electric drill and clean, rust-free paddle.</td>
<td>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.</td>
</tr>
</tbody>
</table>

### Spray Application

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

- 50 wet mils to achieve min. 30 mil DFT
- 66 wet mils to achieve min. 40 mil DFT where 40 DFT is specified. Achieve a void and pinhole free surface. 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 of wet material to prevent sag, especially on non-porous surfaces and during cold or damp weather. Work away from the sun during application.

**Roller Application**

Roller application is recommended at detail areas such as treatment of sheathing joints and rough openings with StoGuard Fabric. Use a ¼ inch (9 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. Hot and/or dry conditions accelerate drying. 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.
- Weather exposure: protect WRB with wall cladding within 180 days of installation.
- Allowable in-service temperature range: -40°F to 180°F (-40°C to 85°C)
- Fire-retardant or pressure treated plywood must be dry with surface free of salts or other chemicals migrating from within the wood. Test adherence to be sure of desired results.

### 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.