# Sto Gold Coat

81636 Sto Gold Coat
Fluid-applied Vapor Permeable Air Barrier, WRB

## Technical Data

<table>
<thead>
<tr>
<th>REPORT</th>
<th>TEST METHOD</th>
<th>TEST CRITERIA</th>
<th>TEST RESULTS</th>
</tr>
</thead>
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<tr>
<td><strong>Accelerated Weathering/Hydrostatic Pressure</strong></td>
<td>ASTM E2570/ AATCC 127 (modified)</td>
<td>No cracking of the coating or bond failure, no water penetration after cyclic weathering &amp; 5 hour water column (21.5 in [55 cm])</td>
<td>Pass</td>
</tr>
<tr>
<td><strong>Adhesion to Substrates</strong></td>
<td>ASTM E2570/C297</td>
<td>≥ 15 psi (103 kPa)</td>
<td>&gt; 15 psi (105 kPa) over glass mat gypsum sheathing &gt; 50 psi (345 kPa) over CMU, OSB &amp; plywood sheathing</td>
</tr>
<tr>
<td><strong>Air Leakage Resistance</strong></td>
<td>ASTM E2178</td>
<td>&lt; 0.2 L/s·m²·s @ 75 Pa</td>
<td>Pass</td>
</tr>
<tr>
<td><strong>Air Leakage of Air Barrier Assembly</strong></td>
<td>ASTM E2357</td>
<td>&lt; 0.2 L/s·m²·s @ 75 Pa</td>
<td>Pass*</td>
</tr>
<tr>
<td><strong>Freeze-Thaw Resistance</strong></td>
<td>ASTM D2570/E2485</td>
<td>No deleterious effects after 10 cycles when viewed under 5X magnification</td>
<td>Pass</td>
</tr>
<tr>
<td><strong>Fire Testing</strong></td>
<td>NFPA 285</td>
<td>Comply with acceptance criteria for vertical and lateral flame propagation and thermocouple temperature limits</td>
<td>Complies in multiple wall assemblies (refer to Sto Corp NFPA 285 directory)</td>
</tr>
<tr>
<td><strong>ASTM E1354</strong> (at incident radiant heat flux of 50kW/m²)</td>
<td></td>
<td>Peak Heat Release Rate: &lt; 150 kW/m² Total Heat Release: &lt; 20 MJ/m² Effective Heat of Combustion: &lt; 18 MJ/kg</td>
<td>PHR: 85.69 THR: 1.61 EHC: 2.50</td>
</tr>
<tr>
<td><strong>ASTM E84</strong></td>
<td>Flame Spread: &lt; 25 Smoke Developed: &lt; 450</td>
<td>FS: 0 SD: 5</td>
<td></td>
</tr>
<tr>
<td><strong>Nail Sealability</strong></td>
<td>ASTM D1970</td>
<td>No water penetration after 72 hours at 40°F (4°C)</td>
<td>Pass</td>
</tr>
<tr>
<td><strong>Mold Resistance</strong></td>
<td>ASTM D3273</td>
<td>No mold growth after 28d</td>
<td>Pass at 90 days</td>
</tr>
<tr>
<td><strong>Structural, Racking, and Restrained Environmental Conditioning</strong></td>
<td>ASTM E2570/E1233/E72-(par 6.6.3)</td>
<td>No cracking in the field of the panel, at substrate joints, and at the interface with flashing</td>
<td>Pass</td>
</tr>
<tr>
<td><strong>Water Penetration Resistance</strong></td>
<td>ASTM E331</td>
<td>No water penetration after 15 minutes water spray with applied pressure of 2.86 psi (137 Pa)</td>
<td>No water penetration after sequence of 15 minute water sprays at 2.86, 6.24, 12.0, and 15.0 psi (137, 299, 574, and 718 Pa)</td>
</tr>
<tr>
<td><strong>Water Resistance</strong></td>
<td>ASTM D2247</td>
<td>No deleterious effects after 14 day water exposure</td>
<td>Pass</td>
</tr>
<tr>
<td><strong>Water Vapor Permeance</strong></td>
<td>ASTM E96 Method B</td>
<td>Measure 19 perms at 7-8 DFT (1087 ng·Pa·s·m⁻³)</td>
<td></td>
</tr>
<tr>
<td><strong>%Solids (by volume)</strong></td>
<td>Calculation</td>
<td>N/A</td>
<td>64%</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>Gold</td>
</tr>
</tbody>
</table>

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

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Sto Gold Coat is a fluid-applied vapor permeable air barrier and water-resistant barrier (WRB) with built-in anti-freeze properties. It is used over prepared vertical above grade concrete, concrete masonry, brick masonry, wood and glass mat gypsum sheathing behind StoTherm® ci and other wall claddings.

### Approximate Coverage

**Glass Mat Gypsum:** 450-550 ft² (42-51m²) per pail when applied at 10-12 wet mils (5-7 mil DFT)

**Plywood:** 550-600 ft² (51-56m²) when applied at 10-12 wet mils (5-7 mil DFT)

**OSB:** 350-550 ft² (32-51m²) when applied at 12-16 wet mils (8-10 mil DFT)

**CMU:** 100-300 ft² (9.3-28m²) when applied in 2 coats at 10-30 wet mils (7-19 mil DFT) per coat

Coverage may vary depending on substrate condition, 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

12 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.
Sto Gold Coat

Product Bulletin

Features

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. UV durable
   Can be left exposed for up to 6 months before covering with wall cladding

5. Low temperature application
   Can be applied at temperatures down to 25°F (-3.8°C)

6. Built-in freeze protection
   Not damaged if temperatures fall below freezing immediately after application

7. Spray applied with airless spray equipment
   Easy, fast installation; does not require specialized spray equipment

8. Water-based and low VOC
   Safe, VOC compliant, easy clean-up, improved IAQ

9. Compatible with all StoGuard Products
   Reliability and peace of mind

Precautions and Limitations

- Do not store at or below freezing temperatures.
- Application range is at ambient temperatures between 25° and 100°F (-3.8° and 38°C) during application and drying period. **Strictly adhere to Special Instructions for Cold Temperature Application if installing below 40°F (4°C).** Do not apply if substrate or ambient temperature is less than 25°F (-3.8°C), or if temperatures will go below 25°F (-3.8°C) at any time during the application or 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. When used in conjunction with adhesively attached StoTherm ci Systems ensure the surface is clean, dry and free of surface contamination before adhesive attachment.
- Exercise care when mechanically attaching wall assembly components through Sto Gold Coat so that fasteners go into (not between) framing supports. Do not use powder actuated or other fastening devices that can damage the substrate. Seal all penetrations through the wall to make them watertight. Test assemblies when necessary to make them watertight.
- Allowable in-service temperature range: -40° to 180°F (-40° 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.
- Ventilate temporary heaters to the exterior to prevent water vapor from accumulating on or within the wall assembly materials.
- Use a slip sheet, typically one layer of building paper (or Sto DrainScreen™ and building paper), between Sto Gold Coat and stucco or adhered masonry veneer over metal lath.

Benefits

- Minimizes risk of damage
- Minimizes risk of condensation in walls
- Rigid and stable under air pressure loads; does not tear or blow off the wall with wind
- Can be left exposed for up to 6 months before covering with wall cladding
- Can be applied at temperatures down to 25°F (-3.8°C)
- Not damaged if temperatures fall below freezing immediately after application
- Easy, fast installation; does not require specialized spray equipment
- Safe, VOC compliant, easy clean-up, improved IAQ
- Reliability and peace of mind

1. Refer to Special Instructions for Cold Temperature Application on page 3 for required conditions
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 ASTM C1177 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 RapidGuard. If cracks are structural consult an engineer. Note: for fast drying in cold or damp weather use Sto RapidGuard™ for detailing and pre-treatments. Apply Sto Gold Coat over Sto RapidGuard™ within 48 hours of its drying for best adhesion.

Mixing
Mix to a uniform consistency with an electric drill and clean, rust-free paddle. Do not thin or dilute with water.

Application
For best results apply between 40° and 100°F (4° and 38°C) during application and drying period. Apply only to fully cured, structurally sound, clean, dry, properly prepared, frost-free surfaces.

Special Instruction for Cold Temperature Application
Sto Gold Coat has built-in weather protection that enables it to be applied at temperatures less than 40° down to 25°F (4° down to -3.8°C), provided certain conditions are met:
1. Material is pre-conditioned to 65°-75°F (18°-24°C)
2. Substrate and ambient temperatures are minimum 25°F (-3.8°C) and rising at the time of application and do not fall below 25°F (-3.8°C) until material is fully dry.
3. Materials are installed over standard sheathing substrates – glass mat gypsum, plywood, or OSB.
4. Substrate surfaces are frost-free, dry and remain dry.
5. Materials are installed at the recommended wet film thickness of 10-12 (5-7 DFT).
6. Materials are installed with StoGuard Fabric for joint and rough opening treatments.
7. Materials are installed in dry weather and protected from rain or other precipitation for at least 24 hours and relative humidity (RH) remains at or below 50%
IMPORTANT: Final water barrier and air barrier properties, and film toughness, depend on temperatures rising above freezing.

Application
Exterior Gypsum Sheathing, Glass-Mat Sheathing, Exterior Plywood and Oriented Strand Board (OSB): apply Sto Gold Coat to the prepared substrate using a ½ inch (13mm) nap roller or airless spray equipment that supports minimum 1 gallon (3.8 L) per minute. Suggested tip size is .031. Pressure and tip size may vary depending on equipment used. Apply uniformly at recommended wet mil thickness. CMU surfaces: apply minimum 2 coats uniformly by airless spray at 10-30 wet mils per coat, allowing the first coat to set slightly, then double back with a second coat. Alternatively allow the 1st coat to fully dry before applying the 2nd coat. 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. IMPORTANT: OSB substrates may require touch-up. CMU substrates may require more than 2 coats depending on joint profile, CMU porosity, unit weight, and other variables that may exist. For “rough” CMU wall surfaces skin coat the entire wall surface with one of Sto’s cementitious levelers, then apply 1 coat of Sto Gold Coat. Achieve a VOID and PINHOLE FREE surface on all substrates.

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

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 temperatures less than 25°F (-3.8°C) 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.

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

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 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.

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S155-81636
Revision Number: A1.0
Date: 02/2019

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 EXRESSED OR IMPLIED EXCEPT FOR EXPLICITLY LIMITED WRITTEN WARRANTIES ISSUED TO AND ACCORDANCE WITH STO’S WARRANTY PROGRAMS WHICH ARE SUBJECT TO CHANGE FROM TIME TO TIME. For the latest, most current information on proper application, cleaning, mixing and other specifications and warranties, cautions and disclaimers, please refer to the Sto Corp. website, www.stocorp.com.