

Sto Gold Coat

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



Technical Data

REPORT	TEST METHOD	TEST CRITERIA	TEST RESULTS
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])	Pass
Adhesion to Substrates	ASTM E2570/C297	≥ 15 psi (103 kPa)	> 15 psi (105 kPa) over glass mat gypsum sheathing > 50 psi (345 kPa) over CMU, OSB & plywood sheathing
Air Leakage Resistance	ASTM E2178	< 0.02 L/s•m ² •s @ 75 Pa (<0.004 cfm/ft ² @ 1.57 psf)	Pass
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*
Freeze-Thaw Resistance	ASTM D2570/E2485	No deleterious effects after 10 cycles when viewed under 5X magnification	Pass
Fire Testing	NFPA 285	Comply with acceptance criteria for vertical and lateral flame propagation and thermocouple temperature limits	Complies in multiple wall assemblies (refer to Sto Corp NFPA 285 directory)
	ASTM E1354 (at incident radiant heat flux of 50kW/m ²)	Peak Heat Release Rate: < 150 kW/m ² Total Heat Release: < 20 MJ/m ² Effective Heat of Combustion: < 18 MJ/kg	PHR: 85.69 THR: 1.61 EHC: 2.50
	ASTM E84	Flame Spread: < 25 Smoke Developed: < 450	FS: 0 SD: 5
Nail Sealability	ASTM D1970	No water penetration after 72 hours at 40°F (4°C)	Pass
Mold Resistance	ASTM D3273	No mold growth after 28d	Pass at 90 days
Structural, Racking, and Restrained Environmental Conditioning	ASTM E2570/E1233/ E72-(par 6.6.3)	No cracking in the field of the panel, at substrate joints, and at the interface with flashing	Pass
Water Penetration Resistance	ASTM E331	No water penetration after 15 minutes water spray with applied pressure of 2.86 psf (137 Pa)	No water penetration after sequence of 15 minute water sprays at 2.86, 6.24, 12.0, and 15.0 psf (137, 299, 574, and 718 Pa)
Water Resistance	ASTM D2247	No deleterious effects after 14 day water exposure	Pass
Water Vapor Permeance	ASTM E96 Method B	Measure	19 perms at 7-8 DFT (1087 ng/Pa•s•m ²)
%Solids (by volume)	Calculation	N/A	64%
Color	N/A	N/A	Gold

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

Sto Gold Coat is a fluid-applied vapor permeable air barrier and water-resistive 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

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

Regulatory Compliance

VOC Compliance	Complies with US EPA (40 CFR 59) and South Coast AQMD (Rule 1113) VOC emission standards for waterproofing sealer, VOC < 50 g/L
Building Code Compliance	<ul style="list-style-type: none"> Meets requirements of 2015 and 2018 IBC, IRC, and IECC as an air barrier and water-resistive barrier, ICC ES AC 212 and ASTM E 2570 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) Meets 2015 and 2018 IBC Exception criteria for use on noncombustible construction with mass veneers for buildings over [or under] 40 feet (12.2 m) in height (when it is the only combustible component in the wall assembly; refer to 2015 IBC Par. 1403.5 or 2018 IBC par. 1403.2)
Green Building Standards and Code Conformance	<ul style="list-style-type: none"> 2016 CALGreen, Title 24, requirements for air barriers and WRBs 2015 IgCC requirements for air barriers 2015 ICC <i>National Green Building Standard</i> requirements for WRBs 2014 ASHRAE 189.1 requirements for air barriers

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 UV durable	Can be left exposed for up to 6 months before covering with wall cladding
5 Low temperature application¹	Can be applied at temperatures down to 25°F (-3.8°C)
6 Built-in freeze protection¹	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

1. Refer to Special Instructions for Cold Temperature Application on page 3 for required conditions

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. Remove any dirt or 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.



Product Bulletin

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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 mills per coat, allowing the first coat to set slightly, then doubling 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 skim 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 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.

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.

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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.