

# Sto Gold Coat®

80265 Sto Gold Coat®

Fluid-applied vapour permeable air barrier

ASHRAE 90.1 Compliant

ASHRAE 189.1 Compliant

ICC Code Recognition

ASTM E-2357 Evaluated

CCMC Evaluation Report



## Technical Data

### StoGuard® Assembly with Sto Gold Fill® and Sto Gold Coat®

REPORT	TEST METHOD	TEST CRITERIA	TEST RESULTS
<b>Air Leakage of Air Barrier Assembly</b>	ASTM E-2357	$\leq 0.2 \text{ L/s}\cdot\text{m}^2$ at 75 Pa ( $\leq 0.04 \text{ cfm/ft}^2$ at 1.57 psf)	$0.016 \text{ L/s}\cdot\text{m}^2$ at 75 Pa ( $0.003 \text{ cfm/ft}^2$ at 1.57 psf)
<b>Water Penetration Resistance after UV Exposure &amp; Heat Aging</b>	AC 212, Section 4.8 and AATCC 127 (Water Column Method)	210 hours UV exposure, then 25 cycles drying at 120°F (49°C) and soaking, then 21.6 in (55 cm) hydrostatic head for 5 hours without cracking, bond failure or water penetration	No cracking, no bond failure, no water penetration after UV exposure and heat aging.
<b>Structural Loading / Water Penetration Testing</b>	ASTM E-1233/ ASTM E-331	No water at exterior plane of sheathing (exterior gypsum, Glass-Mat Gypsum Sheathing, plywood, OSB) after 10 cycles at 80% design load and 75 minutes water spray at 6.24 psf (299 Pa) pressure differential with water spray rate of $3.4 \text{ L/m}^2\cdot\text{min hr}$ (5 gal/ft <sup>2</sup> ).	No water penetration
<b>Cyclic Pressure/ Water Penetration Testing</b>	ASTM E-283/ ASTM E-331	No water penetration or evidence of elevated moisture levels in plywood sheathing after 10 cycles of conditioning at 299 Pa (6.24 psf) positive and negative pressure followed by 75 minutes water spray at 6.24 psf (299 Pa) pressure differential with water spray rate of $3.4 \text{ L/m}^2\cdot\text{min hr}$ (5 gal/ft <sup>2</sup> )	No water penetration, no elevated moisture levels
<b>Water Resistance Testing</b>	ASTM D-2247	Absence of deleterious effects after 14 day exposure	No deleterious effects after 14 day exposure
<b>Resistance to Mold Growth</b>	ASTM D-3273	No mold growth after 28 days	No mold growth after 28 day exposure
<b>Freeze/Thaw Resistance</b>	ICBO Method (AC 24)	No visible effects (cracking, checking, delamination, erosion) when reviewed at 5x	No visible deleterious effects at 5x magnification
<b>Water Vapour Permeance</b>	ASTM E-96	>5 US perms (287 ng/Pa·s·m <sup>2</sup> ) Method B (Water Method)	>10 US perms (575 ng/Pa·s·m <sup>2</sup> )
<b>Air Barrier</b>	ASTM E-2178	$< 0.02 \text{ L/s}\cdot\text{m}^2$ @ 75 Pa ( $< 0.004 \text{ cfm/ft}^2$ @ 1.57 psf)	$0.001 \text{ L/s}\cdot\text{m}^2$ (0.0002 cfm/ft <sup>2</sup> )
<b>Structural Integrity</b>	ASTM E-330	2 inches (51 mm) water pressure (positive and negative) for 1 hour	No loss of structural integrity
<b>Nail Sealability</b>	ASTM D-1970		Pass
<b>Flexibility</b>	ASTM D-522	No cracking or delamination using 1/8" (3 mm) mandrel at 14° F (-10° C) before and after aging	No cracking or delamination before and after aging
<b>Tensile Adhesion</b>	ASTM C-297	> 15 psi (103 kPa)	Gypsum (ASTM C79): > 30 psi (206 kPa) Gypsum (ASTM C1177): > 30psi (206 kPa) Exposure OSB: > 50 psi (344 kPa) Exterior Plywood: > 90 psi (620 kPa)
<b>Tensile Bond:</b>	ASTM D-4541	Dow 790 to Sto Gold Coat Dow 795 to Sto Gold Coat	55 psi 89 psi
<b>Surface Burning</b>	ASTM E-84 (with StoGuard Fabric)	Flame Spread: $\leq 25$ Smoke Developed: $\leq 450$	Flame Spread: 15 Smoke Developed: 40 ICC and NFPA Class A Building Material
<b>Fire Testing</b>	NFPA 285 (formerly UBC 26-9)	No increase in fire hazard	Pass
<b>VOC (g/L)</b>	This product complies with US EPA (40 CFR 59) and South Coast AQMD (Rule 1113) VOC emission standards for architectural coatings. VOC less than 100 g/L.		
<b>% Solids (by volume)</b>	Calculated		60%

Notes: 1. IBC: International Building Code. 2. NFPA: National Fire Protection Association.

Sto Gold Coat is a ready-mixed flexible waterproof air barrier membrane for use in StoTherm® ci Systems. It is applied directly to vertical above grade wall sheathing and concrete masonry, and functions as a waterproof air barrier when combined with StoGuard joint and rough opening treatment.

Sto Gold Coat is one component of the StoGuard Assembly, a fluid-applied membrane that offers a superior waterproof air barrier.

#### Coverages (per pail)

Glass-Mat Gypsum Sheathing\*: 39-49 m<sup>2</sup> (425-525 ft<sup>2</sup>)

Exterior Gypsum: 51-60m<sup>2</sup> (550-650 ft<sup>2</sup>)

Plywood: 51-60 m<sup>2</sup> (550-650 ft<sup>2</sup>)  
OSB: (2 coats): 20.9-25.5 m<sup>2</sup> (225-275 ft<sup>2</sup>).

CMU: (2 coats): 9.3-28 m<sup>2</sup> (100-300 ft<sup>2</sup>)

**When used with StoGuard Fabric to treat the sheathing joints and rough openings:**

Glass Mat Gypsum Sheathing\*: 37-46 m<sup>2</sup> (400-500 ft<sup>2</sup>)

Exterior Gypsum: 500-600 ft<sup>2</sup> (46-56 m<sup>2</sup>)

Plywood: 37-46m<sup>2</sup> (400-500 ft<sup>2</sup>)  
OSB: 33-42 m<sup>2</sup>(300-400 ft<sup>2</sup>)

CMU: (2 coats) 9.3-28m<sup>2</sup> (100-300 ft<sup>2</sup>)

\*Coverage may vary depending on application technique and surface conditions and glass mat gypsum sheathing brand. Refer to Sto Tech Hotline No. 0614-BSc.

#### Packaging

5 gallon (19L).

#### Shelf Life

18 months, if properly stored and sealed.

#### Storage:

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

## Sto Gold Coat®

Features	Benefits
1. <b>Waterproof</b>	Minimizes risk of water damage and associated repair or replacement costs
2. <b>Vapour Permeable</b>	Minimizes risk of condensation in wall from water vapour diffusion
3. <b>Structural</b>	No air leakage between the sheathing and StoGuard; rigid and stable under air pressure loads; does not tear or blow off the wall with wind
4. <b>Seamless</b>	No tears, holes, or mislapped joints that can compromise performance in service
5. <b>Durable</b>	Does not tear or lose its effectiveness with exposure to weather during construction or while in service
6. <b>Spray Applied via Airless Spray Equipment</b>	Easy, fast installation; does not require specialized spray equipment
7. <b>Resists UV Degradation</b>	Gives peace of mind if construction delays occur
8. <b>Liquid Formulation - Water Based</b>	Safe, non-toxic, VOC compliant, saves time and money when installing the product, does not require highly skilled labor
9. <b>Safe for Interior and Exterior Use</b>	Low VOC, low flame spread and smoke development

## Surface Preparation

Surfaces must be clean, dry, and free of frost, damage and all bond-inhibiting materials, including dirt, efflorescence, form oil and other foreign matter. Damaged sheathing must be removed and replaced. Avoid application over irregular surfaces. Substrate to be coated must be continuous without joints, holes, etc. exceeding 1/32" (0.8 mm) in size. Sheathing must be properly installed as required by applicable building codes or sheathing manufacturer.

## Mixing

Mix with a clean, rust-free electric drill and paddle to a uniform consistency. **PRODUCT MUST NOT BE THINNED OR DILUTED.**

## Application

Apply only to sound and clean, dry, properly prepared, frost-free surfaces. Sheathing joints, inside and outside corners and rough openings must be treated with StoGuard joint and rough opening treatment. Spot fasteners, knots or other voids in sheathing surface with Sto Gold Fill. If using StoGuard Fabric, pre-spot all fasteners with Sto Gold Coat. Spot surface defects such as overdriven fasteners, knots or other voids in sheathing surface with Sto Gold Fill.

**Over Exterior Gypsum Sheathing, Glass-Mat Gypsum Sheathing, Exterior Plywood:** Apply Sto Gold Coat to the prepared substrate using spray equipment such as Sto's M-8 Spray Pump or airless spray equipment that can support a minimum 1 Gallon per minute (GPM) and a .031 mil tip at 3000+ psi., or with the appropriate size nap roller in a single, uniform coating at a wet thickness of 10 mils. Application over Glass-Mat Gypsum Sheathing, plywood and exterior gypsum sheathing: use a 1/2" (13 mm) nap roller.

**Over Oriented Strand Board (OSB):** A two-coat application of Sto Gold Coat is required over OSB. The first coat is applied over the prepared substrate prior to treating sheathing joints, rough openings, and corners. Apply Sto Gold Coat by spray or roller with a 1/2" (13 mm) nap roller in a single, uniform coating at a wet thickness of 10 mils and allow drying. For air barrier, sheathing joints, rough openings, and corners must then be covered with StoGuard joint treatment. Substrate to receive the second coat of Sto Gold Coat must be continuous without joints, holes, etc. exceeding 1/32" (0.8 mm) in size. The second coat of Sto Gold Coat must be applied over the treated surface in a single, uniform coating to a wet thickness of 10 mils.

**Over Concrete Masonry Wall Construction:**

Concrete masonry wall construction must be structurally sound, clean, dry, and free from damage, frost, and all bond-inhibiting material, including dust, dirt, mold, algae, and efflorescence. Repair cracks up to 1/8 inch (3 mm) wide by filling with Sto Gold Fill. Rake the crack with a sharp tool to remove loose or friable material, and blow clean with oil-free compressed air. Apply Sto Gold Fill by spray, trowel or putty knife over the crack and smooth with the knife or trowel. For cracks wider than 1/8" (3 mm) and up to 1/4" (6 mm) wide, use a paintable acrylic latex caulk to fill the crack, tool flush with the surface, and allow drying completely. For moving cracks consult a structural engineer. Do not use Sto Gold Fill to repair moving cracks or cracks wider than 1/8" (3 mm). Protect crack repair materials from rain and freezing until dry.

**For Air and Moisture Barrier:**

**Spray-applied over CMU:** Apply Sto Gold Coat uniformly with the Sto M-8 pump, airless spray, or other suitable spray equipment. Back-roll to fill the surface and allow drying. Apply a second uniform coat of Sto Gold Coat and back-roll to achieve a void and pinhole free surface. Depending on the condition of the surface a minimum of 10 wet mils up to a maximum of 30 wet mils per coat is required. Apply additional coats if needed to achieve a VOID AND PINHOLE FREE surface.

**Roller-applied over CMU:** Apply Sto Gold Coat uniformly with a 3/4 inch (19 mm) nap roller and allow drying. Apply a second uniform coat of Sto Gold Coat to achieve a void and pinhole free surface. Depending on the condition of the surface a minimum of 10 wet mils up to a maximum of 30 wet mils per coat is required. Apply additional coats if needed to achieve a VOID AND PINHOLE FREE surface.

**IMPORTANT NOTE:** Sto Gold Coat functions as a waterproof air barrier on normal weight concrete masonry unit wall construction with flush (struck flush with the surface of the CMU) or concave joints when a minimum of two liberal coats are applied. Additional coats may be necessary depending on the condition of the CMU wall surface, CMU porosity, joint profile, and other variables that may exist. For "rough" CMU wall surfaces, skim coat the entire surface with one of Sto's cementitious levelers (Sto Leveler, Sto BTS® Plus, Sto BTS® Silo, or Sto Primer/Adhesive-B) before application of Sto Gold Coat. A VOID AND PINHOLE FREE SURFACE must be achieved for Sto Gold Coat to properly function as a waterproof air barrier on CMU wall surfaces.

**Curing/Drying**

Sto Gold Coat is dry to touch and can be over coated within 2-4 hours under normal conditions [70°F (21°C), 50% RH]. Wait 24 hours before adhesive attachment of Sto insulation board. Final drying varies depending on temperature / humidity and surface conditions. Protect from rain and freezing until completely dry.

# Sto Gold Coat®

## Application Continued

Cold Weather Insurance: Sto Gold Coat has built-in weather protection that enables it to be applied, even as temperatures fall below freezing (down to -3.8°C [25°F]) after application, provided certain conditions exist:

1. Substrate and ambient temperatures are 0.0°C (32° F) or above at the time of application
2. Substrate surfaces are dry and remain dry
3. Materials are installed at the recommended wet film thickness of 8-10 (5-7 DFT)
4. Materials are installed over standard substrates – glass mat gypsum sheathing, plywood and OSB sheathing, or CMU
5. Materials are installed with StoGuard® Fabric (and StoGuard® RediCorners™) for joint and rough opening treatments
6. Materials are protected from rain or precipitation for at least 24 hours and relative humidity (RH) remains at or below 50%

While this built-in feature of the products affords additional protection when temperatures fall towards or slightly below freezing, final water and air barrier properties, and film toughness, will depend on temperatures eventually rising above freezing.

For added insurance during cold weather keep materials warm, install materials over substrates that have been heated by the sun, and keep a close eye on weather forecasts to avoid exposures below -3.8°C (25°F) after application , or premature exposure to rain, or other precipitation, or abrasion.

## Material Storage

Keep containers covered to protect from skinning. If skin forms, remove the skinned material from container; remaining material is unaffected by skinned material.

## Clean Up

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

## Limitations

- Apply only when the surface and ambient temperatures are above 40°F (4°C) and below 100°F (38°C) during application and drying period.
- Not recommended for use when cool, damp conditions exist for prolonged periods. Cool, damp conditions retard drying and may require extended periods of protection.
- Do not use on damp surfaces, below grade, or on surfaces subject to water immersion.
- Fire-retardant treated or pressure treated plywood substrates must be dry and free of all bond-inhibiting materials.
- Not recommended for spanning sheathing joints or holes in excess of 1/8" (3 mm) wide.
- See Tech Hotline 0614-BSc for additional information regarding coverage over different brands of glass-mat sheathing.
- Maintain temperatures above 40°F (4°C) during drying period for at least 24 hrs.
- Ventilate temporary heaters to the exterior to prevent water vapour from accumulating on or within the wall assembly materials.
- Sto Gold Coat can be left exposed to weather for up to 6 months of installation to protect the substrate.
- When Sto Gold Coat is used in conjunction with StoTherm ci Systems ensure the Sto Gold Coat surface is clean, dry, and free of surface contamination. Install StoTherm ci insulation board within 30 days of the application of Sto Gold Coat, or clean the surface and recoat with Sto Gold Coat.
- For portland cement stucco and similarly constructed wall assemblies over metal lath refer to Sto EmeraldCoat product bulletin # 80264.
- For complete information refer to StoGuard Air Barrier and Moisture Control Handbook.

## Health And Safety

### Health Precautions

Product is water-based. As with any chemical construction product, exercise care when handling.

### WARNING!

Causes eye and skin irritation.

### Precautionary Statement

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

### FIRST AID MEASURES

**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

Collect with a suitable absorbent material such as cotton rags.

### Disposal

Dispose 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 for further health and safety information.

Safety Data Sheet (SDS) is available at [www.stocorp.com](http://www.stocorp.com)

## Precautions

Exercise care when mechanically attaching wall assembly components through StoGuard so that fasteners go into (not between) framing supports. Do not use power 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 verify performance.

## LIMITED WARRANTY

This product is subject to a written limited warranty which can be obtained free of charge from Sto Corp.

*Refer to Sto Specifications 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 Canada Ltd. website, [www.stocanada.com](http://www.stocanada.com).