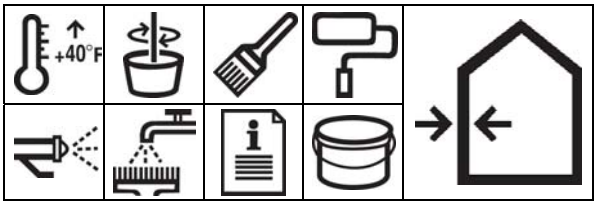
Product Bulletin

Sto Gold Coat®

80265 Sto Gold Coat®
Fluid-applied vapor 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
Air Leakage of Air Barrier Assembly	ASTM E-2357	≤ 0.2 L / s·m² at 75 Pa) (≤ 0.04 cfm / ft² at 1.57 psf)	0.016 L / s·m² at 75 Pa (0.003 cfm / ft² at 1.57 psf)
Water Penetration Resistance after UV Exposure & Heat Aging	AC 212, Section 4.8 and AATCC 127 (Water Column Method)	210 hours UV exposure, then 25 cycles drying at 120ºF (49ºC) 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.
Structural Loading / Water Penetration Testing	ASTM E-1233/ ASTM E-331	No water at exterior plane of sheathing (exterior gypsum, Dens-Glass® Gold, 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 5 gal/ft²·hr (3.4 L/m²·min)	No water penetration
Cyclic Pressure/ Water Penetration Testing	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 5 gal/ft²·hr (3.4 L/m²·min)	No water penetration, no elevated moisture levels
Water Resistance Testing	ASTM D-2247	Absence of deleterious effects after 14 day exposure	No deleterious effects after 14 day exposure
Resistance to Mold Growth	ASTM D-3273	No mold growth after 28 days	No mold growth after 28 day exposure
Freeze/Thaw Resistance	ICBO Method (AC 24)	No visible effects (cracking, checking, delamination, erosion) when reviewed at 5x	No visible deleterious effects at 5x magnification
Water Vapor Permeance	ASTM E-96 Method B (Water Method)	Measure	5.7 perms a 5-7 DFT [327 ng/(Pa·s·m²)]
Air Barrier	ASTM E-2178	< 0.02 L/s·m² @ 75 Pa (< 0.004 cfm/ft² @ 1.57 psf)	0.001 L/s·m² (0.0002 cfm/ft²)
Structural Integrity	ASTM E-330	2 inches (51 mm) water pressure (positive and negative) for 1 hour	No loss of structural integrity
Nail Sealability	ASTM D-1970		Pass
Flexibility	ASTM D-522	No cracking or delamination using 1/8" (3 mm) mandrel at 14º F (-10º C) before and after aging	No cracking or delamination before and after aging
Tensile Adhesion	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)
Tensile Bond:	ASTM D-4541	Dow 790 to Sto Gold Coat Dow 795 to Sto Gold Coat	55 psi 89 psi
Surface Burning	ASTM E-84 (with StoGuard Fabric)	Flame Spread: ≤ 25 Smoke Developed: ≤ 450	Flame Spread: 15 Smoke Developed: 40 ICC and NFPA Class A Building Material

Sto Gold Coat is a ready-mixed flexible waterproof air barrier membrane. 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. StoGuard can be used beneath various claddings including brick, wood, vinyl, or fiber/cement sidings and as part of StoTherm NExT.

Coverages (per pail)
Dens-Glass Gold: 425-525 ft² (39-49 m²)
Exterior Gypsum: 550-650 ft² (51-60 m²)
Plywood: 550-650 ft² (51-60 m²)
OSB: (2 coats): 225-275 ft² (20.9-25.5 m²).
CMU: (2 coats): 100-300 ft² (9.3-28 m²)
When used with StoGuard Fabric to treat the sheathing joints and rough openings:
Dens-Glass Gold: 400-500 ft² (37-46 m²)
Exterior Gypsum: 500-600 ft² (46-56 m²)
Plywood: 400-500 ft² (37-46 m²)
OSB: 300-400 ft² (33-42 m²)
CMU: (2 coats) 100-300 ft² (9.3-28 m²)

Coverage may vary depending on application technique and surface conditions.

Packaging
5 gallon (19L).
Shelf Life
12 months, if properly stored and sealed.
Storage:
Protect from extreme heat [90°F (32° C)], freezing and direct sunlight.

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Technical Data Cont.			
Fire Testing	NFPA 285 (formerly UBC 26-9)	No increase in fire hazard	Pass
VOC (g/L)	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.		
% Solids (by volume)	Calculated		60%

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

Features		Benefits
1	**Waterproof**	Minimizes risk of water damage and associated repair or replacement costs
2	**Vapor Permeable**	Minimizes risk of condensation in wall from water vapor diffusion
3	**Structural**	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	**Seamless**	No tears, holes, or mislapped joints that can compromise performance in service
5	**Durable**	Does not tear or loose its effectiveness with exposure to weather during construction or while in service
6	**Spray Applied via Airless Spray Equipment**	Easy, fast installation; does not require specialized spray equipment
7	**Resists UV Degradation**	Gives peace of mind if construction delays occur
8	**Liquid Formulation - Water Based**	Safe, non-toxic, VOC compliant, saves time and money when installing the product, does not require highly skilled labor
9	**Safe for Interior and Exterior Use**	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 surfaces defects such as overdriven fasteners, knots or other voids in sheathing surface with Sto Gold Fill.

Over Exterior Gypsum Sheathing, Dens-Glass Gold, 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 G-P Dens-Glass Gold, 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.

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Application cont.

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 [70ºF (21ºC), 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.

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 100ºF (38ºC) 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.
- Maintain temperatures above 40°F (4°C) during drying period for at least 24 hrs.
- Ventilate temporary heaters to the exterior to prevent water vapor 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. Install cladding over Sto Gold Coat within 6 months of installation.
- For wood-based sheathing use a slip sheet (typically one layer of building paper) between Sto Gold Coat and metal lath in Portland cement stucco and similarly constructed wall assemblies.

For complete information refer to StoGuard Air Barrier and Moisture Control Handbook.

Precautions

Exercise care when attaching metal lath or other 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. 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.

Health And Safety

Health Precautions

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

Safety Precautions

Use adequate ventilation. Safety goggles and protective gloves are recommended. Remove contaminated clothing immediately.

First Aid

SKIN CONTACT: Wash thoroughly with soap and water. EYE CONTACT: Flush immediately with water for 10-15 minutes and contact a physician. RESPIRATORY PROBLEMS: Remove affected person to fresh air immediately and contact a physician. HYGIENE: Wash hands immediately after use. Wash clothing before re-use.

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 Material Safety Data Sheet for further health and safety information. Material Safety Data Sheet (MSDS) is available at www.stocorp.com

Sto Corp.
3800 Camp Creek Parkway
Building 1400, Suite 120
Atlanta, GA 30331

Tel: 404-346-3666
Toll Free: 1-800-221-2397
Fax: 404 346-3119
www.stocorp.com

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