

264 Sto EmeraldCoat
ICC Code Recognition



Technical Data

TEST	TEST METHOD	TEST CRITERIA	TEST RESULTS
Water Penetration Resistance after weathering and aging	AC 212, Section 4.8 AATCC 127 (Water Column)	No water penetration after 5 hours under 21.6 in (55 cm) water head after UV exposure and accelerated heat aging	No water penetration at 332 in (845 cm) head of water before aging
Transverse Load/Racking/Restrained Environmental Cycling/Water Penetration	ASTM E-1233 ASTM E-72 AC 212 ASTM E-331	No cracking after structural and restrained environmental cycle loading and no water penetration	No cracking and no water penetration after loading
Water Penetration Resistance	ASTM E-331	No leakage after 15 minutes at 2.86 psf (136 Pa)	No leakage
Water Resistance	ASTM D-2247	No deleterious effects after 14 days	No deleterious effects after 14 days exposure period
Resistance to Mold Growth: Sto EmeraldCoat	ASTM D-3273	No mold growth for 28 days	No mold growth after 28 day exposure
Freeze/Thaw Resistance	AC 212, Section 4.2	No deleterious effects after 10 cycles	No deleterious effects after 10 cycle exposure
Water Vapor Permeance	ASTM E-96 (wet cup method)	> 5 US perms (287 ng/Pa·s·m ²)	17.0 US perms (976 ng/Pa·s·m ²)
Air Leakage: Wall Assembly w/Sto Gold Fill & Sto EmeraldCoat	ASTM E-283 (SBCCI PST & ESI Method)	> 0.06 cfm/ft ² @ 1.57 psf (0.00030 l/s·m ²) @ 75 Pa	0.0044 cfm/ft ² (0.000022 l/s·m ²)
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 14°F (-10°C) before and after aging	No cracking or delamination before and after aging
Tensile Adhesion	ASTM C-297	> 15 psi (103 kPa) or exceed strength of substrate	Exposure 1 OSB: 32 psi (221 kPa) Exterior Plywood: 86 psi (592 kPa) Dens-Glass® Gold: exceeds strength of substrate Exterior Gypsum Sheathing: exceeds strength of substrate
Tensile Bond: Dow 790 to Sto EmeraldCoat Dow 795 to Sto EmeraldCoat	ASTM D-4541		55 psi 89 psi
Flame Spread	ASTM E-84	Flame Spread: < 25 Smoke Developed: < 450	Flame Spread: < 25 Smoke Developed: < 450 IBC and NFPA Class A Building Material
Fire Testing	NFPA 285 and 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 50 g/L.		
% Solids (by volume)	Calculated		65%

Notes: 1. IBC: International Building Code. 2. NFPA: National Fire Protection Association. 3. Sto EmeraldCoat complies with ICC-ES AC 212, acceptance criterion for water-resistive coatings used as water-resistive barriers over exterior sheathing.

Features

Benefits

1 Waterproof coating for sheathing	Minimizes risk of water damage to sheathing and associated repair or replacement costs
2 Vapor Permeable	Moisture does not get trapped in the wall cavity
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

Sto EmeraldCoat is a patent pending, ready-mixed, flexible waterproofing material. It is applied directly to wall sheathing and functions as a vertical above grade waterproofing/air barrier when combined with StoGuard™ joint and rough opening treatment.

Sto EmeraldCoat is specially formulated for use beneath Portland cement stucco.

Sto EmeraldCoat is one component of the StoGuard Assembly, which is a liquid applied building wrap that offers a superior waterproofing/air barrier. StoGuard can be used beneath various claddings including Portland cement stucco, vinyl and cement board siding, and brick.

Coverage

Dens-Glass Gold: 425-525 ft²
(39-49 m²) per pail.
Exterior Gypsum: 550-650 ft²
(51-60 m²) per pail.
Plywood: 425-525 ft²
(39-49 m²) per pail.
OSB: 400-500 ft²
(37-46 m²) per pail.
CMU: (2 coats) 100-300 ft²
(9.3-28 m²) per pail.

Coverages may vary depending on application technique and surface conditions.

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

Dens-Glass Gold: 400-500 ft²
(37-46 m²) per pail.
Exterior Gypsum: 500-600 ft²
(46-56 m²) per pail.
Plywood: 400-500 ft²
(37-46 m²) per pail.
OSB: 350-450 ft²
(33-42 m²) per pail.
CMU: (2 coats) 100-300 ft²
(9.3-28 m²) per pail.

Coverages may vary depending on the number of rough openings as well as surface conditions.

Packaging

5 gallon (19 L) pail.

Shelf Life

12 months, if properly stored and sealed.

Storage

Keep containers covered to protect from skinning. If material skins, remove skinned material from container.

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264 Sto EmeraldCoat®

Features	Benefits
5 Durable	Does not tear or lose 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 Liquid Formulation - Water Based	Safe non-toxic, VOC compliant, saves time and money when installing the product, does not require highly skilled labor

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.

If using StoGuard Fabric pre-spot all fasteners with EmeraldCoat. Spot surface defects such as overdriven fasteners, knots or other voids in sheathing surface with Sto Gold Fill.

Sto EmeraldCoat: Over Exterior Gypsum sheathing, Dens-Glass Gold, Exterior Plywood and Oriented Strand Board (OSB): Apply Sto EmeraldCoat to prepared substrate using spray equipment such as Sto's M-8 Spray Pump, or Graco's airless spray equipment, 595 with a 0.025 mil tip or 625 with a 0.027 mil tip, or with the appropriate size nap roller in a single, uniform coating at a wet thickness of 10 mils. Application over OSB G-P Dens-Glass Gold plywood and exterior gypsum sheathing: use a 1/2 inch (13 mm) nap roller.

OSB sheathing may require touch-up with a second coat of Sto EmeraldCoat where wood strands are raised from the surface. Inspect surface after initial application of Sto EmeraldCoat and touch-up as needed.

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 inch (3 mm) and up to 1/4 inch (6 mm) wide, use a paintable acrylic latex caulk to fill the crack, tool flush with the surface, and allow to dry completely. For moving cracks consult a structural engineer. Do not use Sto Gold Fill to repair moving cracks or cracks wider than 1/8 inch (3 mm). Protect crack repair materials from rain and freezing until dry.

For Air and Moisture Barrier: Spray-applied over CMU. Apply Sto EmeraldCoat uniformly with the Sto M-8 pump, airless spray, or other suitable spray equipment. Backroll to fill the surface and allow to dry. Apply a second uniform coat of Sto EmeraldCoat and backroll

Limitations

- Apply only when surface and ambient temperatures are 40°F (4°C) and rising and below 100°F (38°C) during application and drying period.
- Maintain temperatures above 40°F (4°C) during drying period for at least 24 hours.
- Provide adequate ventilation during application and drying period.
- Ventilate temporary heaters to the exterior to prevent water vapor from accumulating on or within the wall assembly materials.
- Not recommended for use when cool, damp conditions exist for prolonged periods. Cool, damp conditions retard drying and may require extended periods of protection against rain or freezing.
- Sto EmeraldCoat can be left exposed to weather for up to 60 days. Install cladding over Sto EmeraldCoat within 60 days of installation.
- 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 holes or sheathing joints in excess of 1/8 inch (3mm) wide.
- NOT RECOMMENDED FOR USE BENEATH EIFS.

Health And Safety

Health Precautions

Products are 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 reuse.

Spills

Collect with suitable absorbent material such as cotton rags. Then dispose of in accordance with applicable local regulations.

Disposal

Dispose of in accordance with local, state or federal regulations.

Warning

KEEP CONTAINERS 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.

LIMITED WARRANTY

THIS PRODUCT IS SUBJECT TO A WRITTEN LIMITED WARRANTY WHICH CAN BE OBTAINED FREE OF CHARGE FROM: Sto Corp., 3800 Camp Creek Parkway, Building 1400, Suite 120, Atlanta, GA 30331; Tel: 404-346-3666; Fax: 404-346-3119.

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. They 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.

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