

ENVIRO-BARRIER™ SILICONE

ENVIRO-BARRIER™ SILICONE is a silicone air barrier that provides a 100% silicone coating that is solvent-free, fluid-applied, and used to coat and seal above-grade wall assemblies.

KEY FEATURES

- » **UV rating of 15+ years**
- » **Range of Temperature:** Application range of 0°F to 150°F and in-use temperature range of -35°F to 280°F. Temperature has little effect on viscosity of product (within applicable range). Heating in cold climates is not required.
- » **Sealability:** Passes standard water penetration tests for nails and fasteners at required dry film thickness.
- » **Fire/Flame Characteristics:** NFPA 285 - Passed, ASTM E84 - Compliant, Class A. Meets 2015 IBC exceptions for water-resistive barriers.
- » **Rain Ready:** Can be exposed to rain/moisture in as little as 30 minutes.
- » **Primerless Adhesion:** Bonds to most building surfaces without the use of a bonding agent.
- » **Fast Cure:** Product has quick tack time.
- » **Compatibility:** Wide range of compatibility with the Hohmann & Barnard silicone solution system and many existing Hohmann & Barnard product lines.
- » **Simple Installation:** Single coat application, continuous monolithic barrier.
- » **Elastomeric:** Cures as a single layer continuous membrane with flexible properties.
- » **Clean Air GOLD:** Certification states conformance to ANSI/ BIFMA e3 standard credits 7.6.1, 7.6.2 and/ or credit 7.6.3, which includes California Department of Public Health (CDPH) Standard Method v1.2 01350 (2017), as well as conformance to low-emitting materials for WELL and LEED.
- » **Low VOC formulation**

PACKAGING

ENVIRO-BARRIER™ SILICONE is currently available in the following configurations:

- » 5 gallon pails
- » 50 gallon drums

APPLICATION

ENVIRO-BARRIER™ SILICONE coating can be spray-applied, rolled, or brushed onto building surface for ease of application and reduced labor costs.

ENVIRO-BARRIER™ SILICONE coating can be installed over various exterior wall substrates, including:

- » Poured concrete, CMU, Glass mat gypsum sheathing, Cement-board, Plywood, OSB, and Exterior gypsum sheathing.

ENVIRO-BARRIER™ SILICONE SYSTEM

The following components comprise the 100% silicone air and water barrier system:

AIR AND WATER BARRIER COMPONENTS:

- » ENVIRO-BARRIER™ SILICONE
- » ENVIRO-BARRIER™ LIQUID-FLASH™ SILICONE
- » EB SILICONE TS
- » EB REINFORCING FABRIC
- » Copper-Fabric™ NA Copper Fabric Flashing
- » MIGHTY-FLASH™ Stainless Steel Flashing
- » X-SEAL® Tape
- » Stainless Steel Inside/Outsider Corners and End Dams
- » Stainless Steel Termination Bar (T1 or T2)

Please inquire for compatibility with other H&B products.

INSTALLATION INSTRUCTIONS

SURFACE PREPARATION

- » All surfaces must be clean, dry and free of contaminants.
- » Confirm that substrates are dry prior to application of the barrier. Materials such as CMU block and concrete have an affinity to retain moisture, which could impede the ability of the product to bond properly.

INSTALLATION INSTRUCTIONS

SURFACE PREPARATION

- » Before applying ENVIRO-BARRIER™ SILICONE to newly poured concrete, ensure concrete has fully cured for at least 28 days and is free of any release/curing agents.
- » Prior to the application of ENVIRO-BARRIER™ SILICONE, ensure CMUs, grouts, and/or mortars are in place for at least 3 days.
- » Masonry units should be cleaned with a brush or similar abrasion to provide a stable, clean, and dust-free surface for application.
- » Pre-test adhesions of sealants and coatings to substrates.

FOR ADDITIONAL REINFORCEMENT

The EB REINFORCING FABRIC is 100% polyester spun reinforcing fabric used to treat rough openings, inside/outside corners, flashings, penetrations, transitions, changes in plains, etc.

When applying, use ENVIRO-BARRIER™ LIQUID-FLASH™ SILICONE as the main bonding agent, prior to and on top of the fabric. (ENVIRO-BARRIER™ SILICONE can be used as main bonding agent on flat surfaces.)

When installing the EB REINFORCING FABRIC using the ENVIRO-BARRIER™ SILICONE, apply approx. 10 mils of barrier onto your substrate, embed the EB REINFORCING FABRIC into the barrier substrate (ensure that the barrier extends at least 1" past the edges of the reinforcing fabric). Apply ENVIRO-BARRIER™ SILICONE on top of the embedded EB REINFORCING FABRIC (approx. 10 mils using a roller to ensure the application is pinhole free).

INSTALLATION TEMPERATURES

ENVIRO-BARRIER™ SILICONE:

- » Substrates must be clean, dry and frost-free. Application may proceed under colder conditions with substrate surface temperatures as low as 0°F, as long as the material is applied to a dry substrate.
- » Do not apply onto substrate surfaces with temperature at or above 150°F.

CURING AND RE-COAT TIME

This material typically attains a tack-free surface in one to

two hours and achieves full cure within one day (under optimal conditions of 72°F and 50% relative humidity (RH)).

Cooler and lower humidity conditions = slower cure rate.
Warm, moist conditions = faster cure rate.

Once coating has skinned, re-coating/retouching can be done. Surface skinning is achieved between 2 and 28 hours (depending on environmental conditions).

DETAILING OF CONCRETE / MASONRY

1. Fill small voids and cracks up to 3/8" (9 mm) in masonry surfaces with ENVIRO-BARRIER™ LIQUID-FLASH™ SILICONE.
2. Use a joint knife or suitable trowel to press and spread sealant to a nominal 2" (25 mm) width centered on the crack. (See LIQUID-FLASH™ page for more details on install.)
3. Larger cracks or voids larger than 3/8" need to be detailed with silicone liquid flashing, X-SEAL® Tape (See X-SEAL® Tape instructions for more details), or other appropriate patching materials. When spraying to CMU, back rolling will be required to avoid pin holes in the membrane.
4. Control Joints: Transition using EB SILICONE TS (6") and ENVIRO-BARRIER™ LIQUID-FLASH™ accommodate will need to be repaired according to sheathing manufacturer.

SHEATHING INSTALLATION

ENVIRO-BARRIER™ SILICONE will cover normal/minor surface irregularities when properly applied at the required film thickness.

Smaller holes (nail holes, screw holes, punctures, etc.) up to 3/8" should be detailed with ENVIRO-BARRIER™ LIQUID-FLASH™ SILICONE.

Larger holes or damage to the sheathing (large spalls, damaged corners, etc.) that the ENVIRO-BARRIER™ LIQUID-FLASH™ SILICONE cannot treat should be repaired according to the sheathing manufacturer's guidance.

After treatment of screw holes, allow proper cure times.

INSTALLATION INSTRUCTIONS

SHEATHING JOINTS

All sheathing joints must be treated utilizing one of the two methods below (based on joint width). The sheathing joints can be treated prior to of ENVIRO-BARRIER™ SILICONE.

- » Sheathing joints 3/8" or greater must be detailed using ENVIRO-BARRIER™ LIQUID-FLASH™ SILICONE and EB SILICONE TS.
- » Sheathing joints up to 3/8" can be treated with LIQUID-FLASH™ (min 3" wide @25-40 mils).
- » After detailing is complete, apply ENVIRO-BARRIER™ SILICONE at correct mil thickness.

TRANSITIONS

The ENVIRO-BARRIER™ SILICONE system is designed to be continuous at:

- » Transitions
- » Openings
- » Terminations
- » Changes in substrate/plane.

This can be accomplished using ENVIRO-BARRIER™ LIQUID-FLASH™ SILICONE (with or without EB SILICONE TS). Refer to www.h-b.com

FILM THICKNESS

ENVIRO-BARRIER™ SILICONE coating may be applied as a single coat application by spray-roller, however roller application may require two separate coats to achieve the full wet film thickness (WFT) requirement. The applied thickness of ENVIRO-BARRIER™ SILICONE coating should be measured (while still wet) using a wet film thickness gauge to verify that the right amount of material is being applied to the wall.

- » **Wet Film Thickness (WFT) Requirement:** 20 mils
- » **Minimum Dry Film Thickness (DFT):** 17 mils

Note: Can be applied in single coat application or two coat to achieve minimum dry film thickness. If applying two coats, make sure each coat, when combined, achieves minimum dry film thickness of 17 mils.

COVERAGE RATES

The actual coverage rate of ENVIRO-BARRIER™ SILICONE coating can vary based on substrate, application equipment, project conditions and waste. Typical achievable coverage rates:

Substrate:

- » **Smooth Surfaces (sheathing):** ~75ft² per gallon
- » **Masonry Surfaces:** ~65ft² per gallon

Note: Coverage rate will vary based on environmental conditions and substrate conditions.

DETAILING AND REPAIRS

Repairs to the ENVIRO-BARRIER™ SILICONE must be done after the coating has properly cured and is tack.

- » For small/minor repairs, apply ENVIRO-BARRIER™ SILICONE onto the defects and allow for proper cure time.
- » For repairs of defects/damage up to 3/8", apply ENVIRO-BARRIER™ LIQUID-FLASH™ SILICONE and allow for proper cure time.
- » For repairs of larger defects/damage, adhere ENVIRO-BARRIER™ LIQUID-FLASH™ SILICONE (can use EB REINFORCING FABRIC) directly to substrates prior to the application of ENVIRO-BARRIER™ SILICONE.
- » If the coating has already been applied, embed EB REINFORCING FABRIC into the ENVIRO-BARRIER™ LIQUID-FLASH™ SILICONE to treat larger defects/damage.
- » An appropriately sized piece of EB SILICONE TS may be bonded in place with either ENVIRO-BARRIER™ LIQUID-FLASH™ SILICONE or ENVIRO-BARRIER™ SILICONE.
- » When EB SILICONE TS is used for repairs, terminate all edges of the silicone transition sheets with a small bead of silicone (ENVIRO-BARRIER™ LIQUID-FLASH™ SILICONE or ENVIRO-BARRIER™ SILICONE) troweled smooth.

APPLICATION EQUIPMENT

Application of ENVIRO-BARRIER™ SILICONE coating can be accomplished by using a roller, power roller, brush or via the assistance of a sprayer.

For application of ENVIRO-BARRIER™ SILICONE using a sprayer, the following requirements must be met:

- » Spray equipment must be designed to operate safely at the required psi (around 3,000 psi at spray tip).
- » Authorized personnel spraying or using spray equipment should be wearing the appropriate PPE.
- » Sprayer must be free of water prior to coming into contact with the product.
- » Use solvent-resistant sprayer equipment with a vapor lock design, if the product is intended to remain in the hoses for extended periods while applying.

APPLICABLE STANDARDS

ABAA - Tested to performance requirements of the Air Barrier Association of America.

Clean Air GOLD—Certification states conformance to ANSI/ BIFMA e3 standard credits 7.6.1, 7.6.2 and/or credit 7.6.3, which includes California Department of Public Health (CDPH) Standard Method v1.2 01350 (2017), as well as conformance to low-emitting materials for WELL and LEED.

TECHNICAL SERVICES

For assistance with technical services, please contact your local Hohmann & Barnard location, or contact Hohmann & Barnard directly at the contact information provided on the last page of this TDS.

LIMITATIONS

ENVIRO-BARRIER™ SILICONE should not be used in these instances:

- » Application is below grade.
- » Inclement weather is likely within two (2) hours.
- » Application surfaces are wet, frozen and/or dirty.

PRODUCT SAFETY

All users of this product should review the latest Safety Data Sheet and the label affixed to the product for product safety information, handling instructions, personal protective equipment if necessary, and any special storage conditions required. Safety Data Sheets are available at www.H-B.com.

Please refer to product Safety Data Sheet for health and safety guidelines during handling and use, and for emergency response procedures.

PRODUCT HANDLING AND STORAGE

ENVIRO-BARRIER™ SILICONE has a shelf life of 18 months from date of manufacture when stored accordingly in original unopened containers.

- » Do not open containers until ready for use.
- » Do not store ENVIRO-BARRIER™ SILICONE in locations where temperatures could reach above 105°F.
- » Keep containers tightly closed.
- » ENVIRO-BARRIER™ SILICONE coating reacts with atmospheric moisture to propagate the curing process. Once containers are open and exposed to the atmosphere, a skin will form on the material over time. Under hot and humid conditions, the formation of skin can happen in minutes.
- » Can be stored in cold temperatures.
- » Product will not freeze when stored in cold temperatures.
- » Do not store in direct sunlight for long periods of time.
- » Improper storage may decrease the lifespan of the material.

TYPICAL PHYSICAL PROPERTIES

Typical physical properties of ENVIRO-BARRIER™ SILICONE coating as supplied and cured are set forth in the tables below.

TYPICAL PHYSICAL PROPERTIES AT DFT OF 17 MILS

PROPERTY	TEST METHOD	VALUE ⁽¹⁾
Air Permeance - tested at 1.57 psf (75 Pa)	ASTM E2178	0.00004 cfm/ft2 (0.0002 L/s·m2)
	CAN/ULC-741	0.00008 cfm/ft2 (0.0004 L/s·m2)
Application Temperature Range		0°F to 150°F (-18°C to 66°C)
Assembly Air Leakage - tested at 1.57 psf (75 Pa)	ASTM E2357	0.0002 cfm/ft2 (0.0009 L/s·m2)
	CAN/ULC-742	0.0004 cfm/ft2 (0.0019 L/s·m2) Class A1
Color		Gray
Completed Cure Time	Cure time will vary based on environmental conditions	Less than 48 hours
Consistency		Liquid Coating
Crack Bridging Ability (1/16" or 1.5 mm)	ASTM D1970	Pass
Cure Time	Cure time will vary based on environmental conditions	~24 hours
Effective Heat of Combustion	E1354	9.8 MJ/kg
Elongation	ASTM D412	540%
Mildew Resistance	ASTM D5590	0 - No growth
Multi-Story Wall Assembly Burn Test	NFPA 285	Passed
Nail Sealability	ASTM D1970	Pass
Peak Heat Release Rate	E1354	97 kW/m ²
Polymer		100% Silicone
Pull of Strength (concrete)	ASTM D4541	~125 psi
Pull of Strength (fiberglass mat faced gypsum sheathing)	ASTM D4541	44 psi
Recoat Time	Varies with Temp & RH	<2 hours
Resistance to Wind Driven Rain	ASTM D6904	Pass
Service Temperature Range		-40°F to +300°F (-40°C to 149°C)
Solids Content, % by volume	Modified ASTM D2697	90%
Surface Burning Characteristics	ASTM E84	Flame Spread: 10 Smoke Developed: 185 NFPA Class A, UBC Class 1
Tensile Strength	ASTM D412	~203 psi
Total Heat Release	E1354	5.6 MJ/m ²
UV & Weathering Resistance	ASTM G154	No degradation after 5,000 hours
Viscosity	ASTM D2196, Method A	~24,500 centipoise
VOC	EPA Method 24	<24 g/l
Water Vapor Permeance	ASTM E96 Procedure B (Water Method)	10.2 perms @ 17 mils (430 μ) DFT
	ASTM E96 Procedure A (Desiccant Method)	7.9 perms @ 17 mils (430 μ) DFT

(1) The data within the typical physical properties are not to be used as or to develop specifications.

ICC-ES AC212: ACCEPTANCE CRITERIA FOR WATER-RESISTIVE COATINGS USED AS WATER-RESISTANT BARRIER OVER EXTERIOR SHEATHING

Sequential Testing - Structural, Racking, Restrained Environmental Conditioning and Water Penetration		
1. Structural	No cracking within the field of the panel, substrate joints and at interface of flashing	ASTM E1233 Procedure A
2. Racking	No cracking within the field of the panel, substrate joints and at interface of flashing	ASTM E72
3. Restrained Environmental Conditioning	No cracking within the field of the panel, substrate joints and at interface of flashing	ICC-ES AC212
4. Water Penetration	No visible water penetration after Structural, Racking, Retrained Environmental Conditioning: Tested for 15 min. at 2.86 psf (137 Pa)	ASTM E331
Sequential testing - Weathering		
1. UV Light Exposure		ICC-ES AC212
2. Accelerated Aging		ICC-ES AC212
3. Hydrostatic Pressure Test	No water penetration after UV exposure and accelerated aging: Tested for 5 hours with 21.7 in (55 cm) of hydrostatic head	AATCC 127
Freeze-Thaw	No cracking, checking, crazing, erosion, delamination or other deleterious effects	ICC-AC212 ASTM E2485 Method B
Water Resistance	No deleterious effects after 14 day exposure.	ASTM D2247
Tensile Bond	> 15 psi (105 kPa)	ASTM C297

DISCLAIMER: This product is not intended for direct consumer use. Keep out of the reach of children. All information, recommendations, and suggestions appearing herein concerning this product are taken from sources or based upon data believed to be reliable. The information contained in this Technical Data Sheet (TDS) is correct to the best of our knowledge, information and belief as of the date of the publication of this TDS.

The information provided in this TDS and in the Safety Data Sheet (SDS) accompanying this product are set forth as a guideline for safe handling, use, processing, storage, transportation, disposal and release of this product, and are not to be considered a warranty or quality specification. Hohmann & Barnard extends no warranties or guarantees, expressed or implied, makes no representations, and assumes no responsibility as to the accuracy, reliability or completeness of the information presented.

The information contained in this TDS relates only to the specific product designated, and may not be appropriate or valid for the product used in combination with any other materials or products, or in any process, unless specified herein. Since the actual use of the product described herein is beyond our control, Hohmann & Barnard assumes no liability arising out of the use of the product by others. It is the user's responsibility to determine the suitability of the information presented in this SDS, to assess the safety and toxicity of the product under their own conditions of use, and to comply with all applicable federal, state and local laws and regulations. Appropriate warnings and safe handling procedures set forth in this TDS and in the SDS accompanying this product should be provided to all handlers and users of the product.

For questions or information:

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