



Elemax* 2600

Silicone Air and Water-resistive Barrier Coating

Product Description

GE Elemax 2600 silicone air and water-resistive barrier (AWB) is a solvent free, fluid-applied, 100% silicone coating for AWB applications to coat and seal above-grade wall assemblies.

Elemax 2600 silicone AWB coating provides long-term air and water protection from a variety of elements: temperature extremes, sunlight / UV radiation, rain and snow.

Key Features and Typical Benefits

- **Building Code Compliant**—ICC ESR-3983 evaluation report confirms compliance with IBC, IRC, IECC and green code(s) requirements for use as both an air barrier and a water resistive barrier.
- **Seamless, Monolithic Air Barrier**—Fluid application of the all silicone product / system creates a seamless, monolithic air barrier.
- **Simple Installation**—Straightforward system design, easy application and compatibility with adjacent building components eases installation.

Performance

- **Reduced Energy Consumption**—Elemax AWB systems control the flow of air and water through the building envelope and create a contiguous barrier that can reduce energy consumption in a building as much as 35% and guard against water-related issues such as mold, rot and rust.
- **100% Silicone Durability**—Long-term resistance to natural weathering and extreme temperatures with negligible change in elasticity, for sustained performance during the life of the building.
- **UV Resistant**—Exposure for 20+ years without measurable change in properties or performance. Excellent product for use behind open joint and ventilated rain screen claddings.
- **Self-sealing**—Passes water penetration standards for nails and fasteners when tested at system film thickness. Fastener self-sealing ensures that the AWB performs optimally, after the building is fully clad.
- **Fire Characteristics**—NFPA 285: Pass- Acceptable for use in multiple wall assemblies. Meets 2015 IBC exemptions for water-resistive barriers. ASTM E84: Class A Flame Spread and Smoke Generation.

- **Elastomeric**—Cures to form a permanently flexible continuous membrane virtually unaffected by temperature extremes.

Application

- **Seamless, breathable membrane**—Prevents water and air from entering the building, while allowing moisture vapor to escape.
- **Simple One-coat Application**—Elemax 2600 silicone AWB coating can be applied by spray, power roller or brush, and saves labor cost, resulting in a high value versus installed cost.
- **Primerless Adhesion**—Bonds strongly to many typical substrates without the need of a primer.
- **Extended Temperature Range**—Application range of 0°F to 150°F (-18°C to 66°C) and in-use temperature range of -40°F to 300°F (-40°C to 149°C) for any cladding / wall assembly design. Viscosity of product is minimally affected by temperature and does not require heating in cold climates.
- **Rain Ready**—Can be exposed to a medium to heavy rain in as little as 30 minutes.
- **Fast Cure**—For quick re-coat time and ease of touch-up.
- **Application to Various Substrates**—Elemax 2600 silicone AWB 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.
- **Silicone Compatibility**—Compatible with windows, doors, joints and features sealed using silicone.
- **Solvent Free**—Low VOC formula compliant with Bay Area and South Coast Air Quality Management District requirements. Conforms to California Department of Public Health (CDPH) Standard Method v1.2.

Elemax AWB System

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

Air and Water Barrier Components:

- GE Elemax 2600 silicone AWB coating—Fluid applied 100% silicone membrane.
- GE Elemax 5000 Liquid Flashing—Non-sag 100% silicone sealants for joints, seams, gaps, flashing and for adhering transition materials such as GE UltraSpan* silicone transition strips. The following is a list of additional acceptable GE sealants that may be used:
 - GE SCS2000 SilPruf* silicone sealant
 - GE SCS2700 SilPruf LM low modulus silicone sealant
 - GE SCS9000 SilPruf NB non-staining silicone sealant
 - GE SWS silicone weathersealing sealant
- GE UltraSpan UST2200 silicone transition sheets, GE UltraSpan US1100 silicone transition strips, and GE UltraSpan USM pre-cured silicone molded corners may also be used. UltraSpan 100% silicone heat cured rubber can be used for detailing and transitioning across large gaps, expansion joints, drift joints, around penetrations and changes in plane, etc.
- GE RF100 reinforcing fabric—100% polyester spun-laced reinforcing fabric used to treat rough openings, penetrations, inside / outside corners, flashing, transitions, changes in plane, and more. RF100 reinforcing fabric can be used to span static gaps up to 1/2" (13 mm).
- GE Elemax SS Flashing—Stainless steel faced self-adhering membrane with a butyl adhesive that can be used as a throughwall flashing, transition membrane, detail flashing, curtain wall perimeter flashing, window and door pan, jamb closure flashing and roof to parapet flashing.

Potential Applications

Elemax 2600 silicone AWB coating is an excellent product to consider as a long term barrier against the passage of air and water. This product is compatible with silicone materials used to seal and glaze windows, doors, joints and other façade features. In addition, most silicone sealants will bond to cured Elemax 2600 silicone AWB coating, alleviating adhesion concerns at transitions from exterior wall elements to the air and water resistive barrier.

Packaging

Elemax 2600 silicone AWB coating is currently available in the following configurations:

- 5 gallon plastic pails (5-gal [18.9 L] net)
- 55 gallon drums (50-gal [189 L] net)

Colors

Elemax 2600 silicone AWB coating is currently available as a stock color in black. Grey and white may be available upon request. Please contact your MPM sales representative for more details.

Typical Physical Properties

Typical physical property values of Elemax 2600 silicone air and water-resistive silicone barrier coating as supplied and cured are set forth in the tables below.

Typical Properties – Supplied

Property	Value ⁽¹⁾	Test Method
Polymer	100% silicone	
Consistency	Pourable Liquid	
Color	Black	
VOC	<24 g/l	EPA Method 24
Viscosity	~25,000 centipoise	ASTM D2196, Method A
Solids Content, % by volume	90%	Modified ASTM D2697

(1) Typical properties are average data and are not to be used as or to develop specifications.

Typical Physical Properties—continued

Typical Properties – Cured State at 17(430 μ) mils DFT (applied at 19 (480 μ) mils wet)

Property	Value ⁽¹⁾	Test Method
Air Permeance – tested at 1.57 psf (75 Pa)	0.00004 cfm/ft ² (0.0002 L/s.m ²)	ASTM E2178
	0.00008 cfm/ft ² (0.0004 L/s.m ²)	CAN/ULC-741
Assembly Air Leakage - tested at 1.57 psf (75 Pa)	0.0002 cfm/ft ² (0.0009 L/s.m ²)	ASTM E2357
	0.0004 cfm/ft ² (0.0019 L/s.m ²) Class A1	CAN/ULC-742
Water Vapor Permeance	10.5 perms @ 17 mils (430 μ) DFT	ASTM E96 Procedure BW (Inverted Water Method)
	10.2 perms @ 17 mils (430 μ) DFT	ASTM E96 Procedure B (Water Method)
	7.9 perms @ 17 mils (430 μ) DFT	ASTM E96 Procedure A (Desiccant Method)
Water Penetration	No water penetration observed after 15 minutes @ 62.5 psf (2993 Pa)	ASTM E331
Resistance to Wind Driven Rain	Pass: No visual leaks or moisture weight gain observed after 24 hrs @ 26 psf (1245 Pa)	ASTM D6904
UV & Weathering Resistance	No degradation after 5000 hours	ASTM G154
Self Sealability around Nails	Pass	ASTM D1970
Crack Bridging Ability (¹ / ₁₆ " or 1.5 mm)	Pass	ASTM C1305
Mildw Resistance	0 - No growth	ASTM D5590
Application Temperature Range	0°F to 150°F (-18°C to 66°C)	
Service Temperature Range	-40°F to +300°F (-40°C to 149°C)	
Pull of Strength (concrete)	126 psi (0.87 MPa)	ASTM D4541
Pull of Strength (fiberglass mat faced gypsum sheathing)	44 psi (0.30 MPa) ⁽²⁾	ASTM D4541
Tensile Strength	204 psi (1.41 MPa)	ASTM D412 ⁽³⁾
Elongation	542%	ASTM D412 ⁽³⁾
Cure Time, complete	1-2 days	Varies with Temp & RH
Recoat Time	<2 hours	Varies with Temp & RH
Multi-Story Wall Assembly Burn Test	Passed in assembly tested and acceptable for use in various wall assemblies per engineering analysis	NFPA 285
Surface Burning Characteristics	Flame Spread: 10 Smoke Developed: 185 NFPA Class A, UBC Class 1	ASTM E84
Oxygen Consumption (Cone) Calorimeter	Effective Heat of Combustion: 4.6 MJ/kg Peak Heat Release Rate 52.7 kW/m ² Total Heat Release: 7.55 MJ/m ²	ASTM E1354

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, Restrained 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

(1) Typical properties are average data and are not to be used as or to develop specifications.

(2) Full strength of silicone not realized due to failure of fiberglass mat / sheathing substrate prior to coating failure.

(3) Samples were prepared per ASTM D2370 and tested in accordance to ASTM D412.

Installation

Installation Temperatures

The Elemax Air & Water Barrier system can be applied under most seasonal conditions including during colder months. It is important to note that these silicone products will not bond to moist or wet substrates and caution should be used when applying in early morning hours when dew may be present, under colder conditions when frost may be present, or after rainfall when substrates may still contain residual moisture. Substrates must be clean, dry and frost free. Application may proceed under colder conditions as low as 0°F (-18°C) as long as the material is applied to a dry substrate. Do not apply Elemax 2600 silicone AWB coating onto substrates surfaces with temperature at or above 150°F (66°C).

Curing and Recoat Time

The curing rate of Elemax 2600 silicone AWB coating is temperature and humidity dependent. Cooler and lower humidity conditions slow the cure rate, whereas warmer and moist conditions increase the cure rate. Under standard conditions of 72°F (22°C) and 50% relative humidity (RH), this material typically attains a tack-free surface in 1-2 hours and achieves full cure within 24 hours.

Recoating or touch-up can proceed as soon as the coating has achieved a firm surface, which in most climatic conditions is less than 2 hours, however in cold temperatures may be 24-48 hours.

Surface Preparation

- All surfaces must be clean, dry and free of contaminants that may interfere with proper bonding of the sealants and coating.
- New concrete should be in place at least 28 days and free of any curing agents or form release agents prior to the application of the GE Elemax 2600 AWB system. If application must proceed prior to full dry of concrete, an adhesion test is recommended before proceeding.
- CMU / mortars / grouts should be in place at least 3 days prior to the application of the GE Elemax 2600 AWB system.
- Where necessary, clean loose mortar and other contamination on masonry with a wire brush or similar abrasion to provide a stable, clean, and dust-free surface for application.
- Since porous materials can absorb and retain moisture, it is important to confirm that substrates are dry prior to application of the barrier.
- As a best practice, it is recommended to pre-test adhesion of sealant(s) and coating to project substrates, including metals, flashings, plastics, penetrations, etc. Primers are available when needed to enhance adhesion to difficult-to-bond-to substrates.

Treatment of Concrete/Masonry

Fill small voids and cracks up to 1/2" (12 mm) in masonry surfaces with Elemax 5000 Liquid Flashing. Use a joint knife or suitable trowel to press and spread sealant to a nominal 1" (25 mm) width centered on the crack, maintaining minimum sealant thickness of 20-40 mils (508-1016 µ). Repair larger cracks or voids with non-shrinking grout or other appropriate patching material. When spraying to CMU, back rolling will be required to avoid pin holes in the membrane.

Treatment of Sheathing

Holes or Damage

Elemax 2600 silicone AWB coating will cover normal surface irregularities or minor scrapes in sheathing when applied at the proper film thickness. Smaller holes (for example, vacated screw holes, punctures, etc.) up to around 3/8" (10 mm) in diameter should be treated with a troweled application of Elemax 5000 Liquid Flashing. Larger holes or damage to the sheathing (large spalls, damaged corners, etc.) that the coating or sealant cannot obviously accommodate will need to be repaired according to sheathing manufacturer.

Cut Edge of Sheathing (Exposed Gypsum)

Elemax 2600 silicone AWB coating can be rolled or brushed to consolidate exposed gypsum, if necessary.

Screw Heads

Elemax 2600 silicone AWB coating will cover properly-driven screw heads when uniformly applied at the system film thickness. Screw heads that are under or over-driven must be treated using a trowel application of Elemax 5000 Liquid Flashing or additional coat of Elemax 2600 silicone AWB coating either prior to, or after application of the coating. When treating screw heads after coating application, sufficient cure time will be required for the coating to firm up enough to allow trowel application of sealant. This cure time will vary from minutes (summer's heat and humidity) to overnight in some cases (winter's cold and lower RH).

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 or after the application of Elemax 2600 silicone AWB coating. When treating joints after coating application, sufficient cure time will be required for the coating to firm up enough to allow trowel application of sealant. This cure time will vary from minutes (high heat and humidity) to overnight in some cases (cold temperatures). Reference also MPM sheathing joint detail.

Installation—continued

Sheathing Joints—continued

- Sheathing joints up to 1/2" (13 mm) can be treated with a bridge-joint of Elemax 5000 Liquid Flashing by troweling the sealant over the joint seam to a nominal 1 1/2" (38 mm) centered on the joint while maintaining a minimum thickness of 20-40 mils (508-1016 μ). Sheathing joints greater than 1/4" (6 mm) and up to 1/2" (13 mm) require stud backing to be treated with Elemax 5000 Liquid Flashing
- Sheathing joints up to 1/2" (13 mm) can be treated with RF100 properly embedded in Elemax 2600 silicone AWB coating and centered on joint.
 - When embedding RF100 Reinforcing Fabric in Elemax 2600 silicone AWB coating, apply a liberal first coat (minimum of 10 mils [254 μ]) sufficient to saturate RF100 reinforcing fabric and extend at least 1" beyond RF100 reinforcing fabric width. Place RF100 reinforcing fabric in Elemax 2600 silicone AWB coating and apply a second coat (minimum of 10 mils [254 μ]) by roller of Elemax 2600 silicone AWB coating ensuring a pin hole-free application is achieved.

Static Joints > 1/2" (13mm), Expansion Joints and Drift Joints

Static joints can be treated by utilizing Elemax 5000 Liquid Flashing or Elemax 2600 silicone AWB coating as an adhesive reinforced with a strip of UltraSpan* UST2200 silicone transition sheet, centered on joint and extended a minimum 1" (25mm) onto wall.

- When using Elemax 2600 silicone AWB coating as an adhesive, apply a first coat (minimum of 10 mils [254 μ]) by roller in sufficient width to accommodate the UltraSpan UST2200 silicone transition sheet. Wait five minutes until coating becomes tacky and press the UltraSpan UST2200 silicone transition sheet into the coating. Apply a second coat of Elemax 2600 silicone AWB coating (minimum of 10 mils [254 μ]) immediately over the UltraSpan UST2200 silicone transition sheet.

Transitions

The AWB system shall be made continuous at or beyond terminations, transitions, openings, changes in plane and perimeters. This can be accomplished using Elemax 5000 Liquid Flashing, RF100 reinforcing fabric properly embedded in Elemax 2600 silicone AWB, Elemax SS Flashing or a combination of UltraSpan transition strips or a combination of UltraSpan strips adhered with Elemax 5000 Liquid Flashing. Refer to GE AWB system details for installation recommendations at transitions, seams, penetrations and other features.

THROUGH WALL FLASHING

Install Elemax SS Flashing at through wall conditions in accordance with our current specifications, installation guidelines and details.

FILM THICKNESS

Elemax 2600 silicone AWB coating may be applied as a single coat application by spray, however roller application may require two separate coats to achieve the full wet film thickness (WFT) requirement. The applied thickness of Elemax 2600 silicone AWB 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. The wet and dry film thickness requirements of the system are shown in the table below:

Wet Film Thickness (WFT) Requirement	Final Dry Film Thickness (DFT)
19 mils (480 μ)	17 mils (430 μ)

COVERAGE RATES – Elemax 2600 Silicone AWB Coating

The actual coverage rate of Elemax 2600 silicone AWB coating can vary based on substrate, application equipment, project conditions and waste. To identify coverage rates based on the actual project substrates, conditions and equipment that is planned on being used a test mockup is recommended. Theoretical maximum coverage rate at 17 mils (430 μ) DFT is 85 ft²/gal (7.9 m²/gal). The following approximate coverage rates have shown to be attainable:

SUBSTRATE	ft ² per gallon	m ² per gallon
Smooth surfaces (similar to fiberglass-faced sheathing)	70 - 80	6.5 - 7.4
Masonry surfaces (similar to CMU)	60 - 70	5.6 - 6.5

USAGE RATE – Elemax 5000 Liquid Flashing

When used for sheathing joint treatment, apply 20-40 mils (508-1016 μ) thick troweled to nominal 1 1/2" (38 mm) width centered on joint. The following calculated estimates do not take into consideration factors such as: joint gap width, substrate texture, material waste, or other factors. Values are based on maximum yield at 20 mil (508 μ) thickness:

- One cartridge yields approximately 50 lf (15 m)
- One sausage foil yields approximately 100 lf (30 m)
- One 2-gallon pail yields approximately 1288 lf (392 m)

When used for rough opening treatment or general detailing, apply at 20-40 mils (508-1016 μ) thick x 6" (152 mm) width trowel application. The following calculated estimates do not take into consideration factors such as: Construction geometry, substrate texture, material waste, or other factors. Values based on maximum yield at 20 mil (508 μ) thickness:

- One cartridge yields approximately 13 lf (4 m)
- One sausage foil yields approximately 25 lf (8 m)
- One 2-gallon pail yields approximately 322 lf (98 m)

Installation—continued

REPAIRS

The most effective air barrier system is a complete system without gaps, holes, or damage therefore inspect the AWB system before covering and repair any punctures or damaged areas. Ensure that the area to be repaired is clean and dry before proceeding with repairs. Touch up and repairs to the Elemax 2600 silicone AWB coating can be accomplished using brush, spray or roller and should take place after the coating has sufficiently cured such that the coating is firm to the touch and tack free. Repairs can be accomplished using the following methods:

- For small or minor damage such as pin holes, scrapes, etc., apply Elemax 2600 silicone AWB coating directly to defects.
- For small or minor damage such as pin holes, scrapes, screw-heads, and gaps/holes up to $\frac{3}{8}$ " (10 mm) or other breached areas, apply Elemax 5000 Liquid Flashing directly to damaged areas.
- For larger defects, Elemax SS Flashing may be adhered directly to substrates prior to the application of Elemax AWB coating OR if the coating has already been applied, embed Elemax SS Flashing in Elemax 5000 Liquid Flashing to larger defects.
- An appropriately-sized piece of UltraSpan* UST2200 transition sheet may be bonded in place with either Elemax 5000 Liquid Flashing or Elemax 2600 silicone AWB embedment coating. When UltraSpan UST2200 transition sheets are used for repairs, terminate all edges of the silicone transition sheets with a small bead of sealant troweled smooth.

APPLICATION EQUIPMENT

Elemax 2600 silicone AWB coating can be applied by brush and roller; including power rollers. Elemax 2600 silicone AWB coating can also be dispensed directly from pails and drums using air, electric or engine-powered application equipment. Elemax 2600 silicone AWB coating cures in the presence of atmospheric moisture thus spray equipment used to process Elemax 2600 AWB coating:

- Must be free of water prior to loading product into the equipment.
- Must be designed to operate safely at the pressures required to deliver Elemax 2600 silicone AWB coating; typically requires 3000 psi (207 bar) at the tip.
- Should utilize hoses that are solvent resistant, ideally with a vapor lock design if product is intended to remain in the lines for extended periods of time.
- Should be operated only by personnel wearing appropriate Personal Protective Equipment.

Contact an MPM technical services representative for additional equipment recommendations and information.

Applicable Standards

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



ETL Environmental VOC+ - Conforms to California Department of Public Health (CDPH) Standard Method v1.2 for allowable emission concentration for Private Office and School Classroom scenarios.



Technical Services

For additional technical resources, please contact your local customer service center. (See Customer Service Centers section herein for contact information.) Any technical advice furnished by MPM or any representative of MPM concerning any use or application of any MPM product is believed to be reliable, but MPM makes no warranty, expressed or implied, of suitability for use in any application for which such advice is furnished.

Limitations

Customers must evaluate MPM products and make their own determination as to the fitness of use in their particular applications.

Elemax 2600 silicone AWB coating should not be considered for:

- Below-grade applications.
- Wet, frozen or dirty/contaminated surfaces.
- Application when it is raining or if inclement weather is imminent or likely within two (2) hours.

Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

Product Safety, Handling and Storage

Customers considering the use of this product should review the latest Safety Data Sheet and label for product safety information, handling instructions, personal protective equipment if necessary, and any special storage conditions required. Safety Data Sheets are available at www.ge.com/silicones or, upon request from any MPM representative. Use of other materials in conjunction with MPM sealant products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

Handling and Storage

- Do not open containers until ready for use.
- Keep containers tightly closed and the plastic liner pressed closely to the material when not in use. Elemax 2600 silicone AWB 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. The formation of skin will be negligible in colder months but can form quickly (in minutes) under hot and humid conditions. Cured product that has formed on the top of the material must be removed or screened from the bulk material as it may contribute to pump clogging.
- Elemax 2600 silicone AWB coating has a shelf life of 18 months from date of manufacture when stored accordingly in original unopened containers.
- Store Elemax 2600 silicone AWB coating below 109°F (43°C).
- The coating will not freeze. Unheated storage in cold temperatures is acceptable.
- Storing uncured coating in elevated temperatures may lead to a decrease the effective life of the material. Avoid storage in direct sunlight for long periods.

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