

SEC2500 SilShield* AWB

silicone air and water barrier

Product Description

SEC2500 SilShield* AWB is a liquid silicone coating that is an excellent candidate to consider for use in air & water barrier applications to coat and seal above-grade wall assemblies, protecting against air passage and water penetration. SEC2500 SilShield* AWB is a fluid-applied material that is vapor permeable yet completely impervious to liquid water.

Typical Performance Properties

Performance

- **100% Silicone Durability** – Cured silicone rubber exhibits excellent long-term resistance to natural weathering and extreme temperatures with negligible change in elasticity whether used on the exterior or interior of a wall system.
- **Self Sealing** – Passes Nail Sealability standard. Improves durability in typical construction environments.
- **UV Resistant** – Long-term resistance to ultra violet radiation.
- **Fire Rated** – Meets NFPA Class A for flame spread and smoke development.
- **Elastomeric Membrane** – Cures to form a flexible continuous membrane without laps or seams to accommodate typical designed building movement.
- **Air Tight** – Protects against air passage and associated energy losses and moisture related problems.
- **Silicone Compatibility** – Compatible with windows, doors, joints and features sealed using silicone.

Application

- **Primerless Adhesion** – Bonds strongly to many typical substrates without the need of a primer, even difficult to adhere to substrates like fiberglass matt gypsum sheathing.
- **All Temperature Application** – Application is possible even in freezing temperatures. Viscosity of product is independent of temperature and does not require heating.
- **Fast Cure** – For quick re-coat time and easy touch-up.
- **Sealant Compatibility** – Full chemical and adhesive compatibility with GE silicone sealants and transitions.
- **Ease of Application** – A single component liquid that can be applied by spray, roller or brush. Single coat application possible depending on method and substrate.

GE is a registered trademark of General Electric Company and is under license by Momentive Performance Materials Inc. Momentive Performance Materials provides versatile materials as the starting point for its creative approach to ideas that help enable new developments across hundreds of industrial and consumer applications. We are helping customers solve product, process, and performance problems; our silanes, fluids, elastomers, sealants, resins, adhesives, urethane additives, and other specialty products are delivering innovation in everything from car engines to biomedical devices. From helping to develop safer tires and keeping electronics cooler, to improving the feel of lipstick and ensuring the reliability of adhesives, our technologies and enabling solutions are at the frontline of innovation.



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Basic Uses

SEC2500 SilShield* AWB is a candidate for use 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 facade features. In addition, silicone sealing and glazing products will bond to SEC2500, alleviating adhesion concerns at transitions from exterior wall elements to the air and water barrier. The following GE components will provide a 100% silicone air and water barrier system:

Air and Water Barrier Components:

- GE SEC2500 SilShield* AWB silicone air & water barrier – Liquid applied 100% silicone for large surfaces and small cracks or seams.
- GE SilPruf* silicone sealants – Non sag 100% silicone sealant/adhesive for joints, seams, gaps and spaces as well as an adhesive for the UltraSpan* silicone transition strips.
- GE UST2200 UltraSpan* silicone transition strips – 100% silicone heat cured rubber for use in transitions across large gaps, around penetrations and frames. UST2200 is translucent for visual verification of sealant contact and coverage area. US1100 silicone strips may also be used.

Packaging

SEC2500 SilShield* AWB is available in the following configurations:

- 5.2-gal (19.7 L) net in steel pails. Weight is approx 52-lb (23.6 kg)
- 50-gal (189 L) in steel drums. Weight is approx 520-lb (236.1 kg)

NOTE: Keep containers sealed/closed when not in use.

UST2200 is available in the following configurations:

- UST2201.060 – 6" wide transition strip is 0.022" thick and available in 100' long rolls weighing 7.15 lbs. Translucent in color.
- UST2201.120 – 12' wide transition strip is 0.022" thick and available in 100' long rolls weighing 14.3 lbs. Translucent in color.

Limitations

SEC2500 SilShield* AWB should not be applied or used:

- In below-grade applications
- On wet, damp, frozen or dirty/contaminated surfaces.
- On excessively basic or acidic substrates.
- If it is raining or if heavy rain or inclement weather is imminent or likely within 2 hours.

Customer Evaluation

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

Applicable Standards

- ASTM E 2357 Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
- ASTM E 2178 Standard Test Method for Air Permeance of Building Materials
- ASTM D 1970 Test method utilized to determine Self Sealability around nails.
- ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials.

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Typical Properties Supplied

Property	Value ⁽¹⁾	Test Method
Polymer	100% silicone	
Consistency	Pourable Liquid	
Color	Dark Grey	
VOC	<255 g/l	EPA Method 24
Viscosity	~ 10,000 centipoise	WPSTM C-560
Recoat Time	<2 hours	Varies with Temp & RH

Typical Properties – Cured State at 17 mils DFT (applied at 26 mils wet)

Property	Value ⁽¹⁾	Test Method
Solids Content, % by volume	66	WPSTM C-19
Solids Content, % by weight	80	WPSTM C-19
Coverage Rate	62 ft ² (17 mils DFT), 88 ft ² (12 mils DFT). For nail sealability.	
Air Leakage in Air Barrier Assembly	Pass	ASTM E2357
Air Permeance – tested to 6.3 psf (300 Pa)	< 0.00001 L/Pa.m ² .s	ASTM E2178
Water Vapor Permeance at 17 mils DFT	5.5 perms	ASTM D1653
Resistance to Wind Driven Rain	Pass	ASTM D6904
UV & Weathering Resistance	No degradation after 5000 hours	QUV Accelerated Weathering Cycles
Self Sealability around Nails at 17 mils DFT	Pass	ASTM D1970
Crack Bridging Ability (1/16" or 1.5mm)	Pass	ASTM C1305
Application Temperature Range	14°F to 168°F (-10°C to 70°C)	
Service Temperature Range	-55°F to +250°F (-48°C to 121°C)	
Pull of Strength (concrete)	112 psi (0.77 MPa)	ASTM D7234
Pull of Strength (fiberglass mat faced gypsum sheathing)	33 psi (0.23 MPa) ⁽²⁾	ASTM D4541
Tensile Strength	175 psi (1.21 MPa)	ASTM D412
Elongation	350%	ASTM D412
Cure Time, complete	1-2 days	
Surface Burning	Flame Spread: 15 Smoke Developed: 95 NFPA Class A, UBC Class 1	ASTM E84

(1) Average value. Actual value may vary.

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

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Joints and Cracks in Sheathing

Sheathing joints and cracks greater than the 1/16" crack bridging ability of the liquid coating may be filled with a trowel application of GE SilPruf* silicone sealant.† Alternatively, the joint or crack may be treated by utilizing GE SilPruf* as an adhesive reinforced with a strip of GE UST2200 UltraSpan* silicone transition strip prior to application of the coating. Narrow joints may be sealed with a bridge-joint of GE SilPruf* silicone by buttering the sealant over the seam out to >1" on either side.

The following GE silicones products are compatible with SEC2500 SilShield* AWB and UST2200 UltraSpan.*

- GE SCS2000 SilPruf* silicone sealant
- GE SCS2700 SilPruf* LM low modulus silicone sealant
- GE SCS9000 SilPruf* NB non staining silicone sealant

† Refer to specific sealant product datasheet for application and use information.

Joints & Cracks in Masonry

Masonry joints and cracks greater than crack bridging ability shall be filled (routed and filled where necessary) with a trowel application of GE SilPruf* silicone sealant prior to application of the liquid membrane to the surface. The barrier coating can be spray applied immediately after the application of the GE SilPruf* sealant. When rolling or brushing, sufficient time should pass to allow sufficient skin formation on the sealant.

Transitions and Perimeters

Wall surfaces coated with SEC2500 SilShield* AWB shall be made continuous at or beyond terminations, transitions and perimeters. This can be accomplished using GE SilPruf* sealant or a combination of UST2200 UltraSpan* silicone transition strip bonded with GE SilPruf* silicone sealant. The silicone transition strip should typically be extended a minimum distance of 2" (or greater if deemed necessary by building official, designer or consultant) beyond or onto transitions, terminations and perimeters. Refer to GE AWB drawing details for more information.

Surface Preparation

- All surfaces must be clean, dry and free of contaminants that may interfere with proper bonding of the barrier coating.
- Concrete must be fully cured prior to application of the barrier coating.
- Clean loose mortar and other contamination where necessary by wire brush or similar abrasion to provide a stable clean 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 coating.

Installation

- Refer to GE AWB drawing details for installation recommendations at transitions, seams, penetrations and other features.
- SEC2500 SiShield* AWB can be applied by spraying, rolling or brushing. Spraying is the most common method and SEC2500 works in most commercially available spray equipment. Contact a Momentive technical services representative for equipment recommendations
- Coverage rates: Rates vary but typical coverage rates on a smooth surface is approximately 60 ft² / gallon and may be applied with a single coat application. A 26 mil thickness of wet coating will yield the minimum 17 mil dry fill thickness required for nail/screw self sealing capability. An 18 mil WFT will yield 12 mils DFT if nail/screw self sealing is not required.
- Spray or roll the coating on in a continuous operation; alternating horizontal and vertical passes to assure a uniform and seamless application.
- Touch up or damage repair can be accomplished using brush, spray or roller and should take place after coating has cured sufficiently.
- The ultimate cure and tack-free of this product is dependent upon temperature and humidity. Under standard conditions, 72°F (22°C) and 50%RH, this material typically attains a tack-free surface in 1-2 hours and achieves full cure within 24 hours. Tack free time and cure rate increases and decreases relative to temperature and humidity.

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Installation (continued)

Method of Application

- SEC2500 SiShield* AWB is easily dispensed directly from pails and drums using common air, electric or engine-powered spray equipment. Contact Momentive Technical Services for information on equipment useful to apply this material.

Technical Services

Additional technical information and literature is available from Momentive Performance Materials. Laboratory facilities and application engineering are available upon request from Momentive Performance Materials. Any technical advice furnished by Momentive Performance Materials or any representative of Momentive Performance Materials concerning any use or application of any product is believed to be reliable but Momentive Performance Materials makes no warranty, express or implied, of suitability for use in any application for which advice is furnished.

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.

SEC2500 SiShield* AWB is protected by one or more pending US patent applications and foreign counterparts.

Product Safety, Handling and Storage

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

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Emergency Service

Momentive Performance Materials maintains an around-the-clock emergency service for its products.

<u>Location</u>	<u>Emergency Service Provider</u>	<u>Emergency Contact Number</u>
Mainland U.S., Puerto Rico	CHEMTREC	1-800-424-9300
Alaska, Hawaii	CHEMTREC	1-800-424-9300
Canada	CHEMTREC	1-800-424-9300
Europe, Israel	NCEC	+44 (0) 1235239670
Middle East	NCEC	+44 (0) 1235239671
Asia Pacific (except China)	NCEC	+44 (0) 1235239670
China	NCEC	+86-10-5100-3039
Latin America (except Brazil)	NCEC	+44 (0) 1235239670
Brazil	SOS Cotec	08000111767 or 08007071767
All other locations world wide	NCEC	+44 (0) 1235239670
At sea	Radio U.S. Coast Guard in U.S. waters NCEC in International waters	+44 (0) 1235239670

For Health related calls, contact Momentive Performance Materials at +1-518-233-2500 (English only).

DO NOT WAIT. Phone if in doubt. You will be referred to a specialist for advice.

CUSTOMER SERVICE CENTERS

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• RTVs and Elastomers	T +1.800.332.3390	F +1.304.746.1623
• Consumer Sealants & Construction Sealants and Adhesives	T +1.877.943.7325	F +1.304.746.1654

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