



SEC2401 SilShield* Optic

Translucent Silicone Coating

Product Description

GE SEC2401 SilShield Optic is a high solids, silicone elastomeric coating that is an excellent candidate for above-grade waterproofing applications. SEC2401 cures to a durable, watertight and weatherproof barrier that is translucent for visual aesthetics and has outstanding resistance to degradation from natural weathering.

Key Features and Typical Benefits

Performance

- **Silicone Durability**—Displays excellent long-term resistance to ultraviolet radiation, natural weathering, humidity, high and low temperatures with negligible change in elasticity.
- **Breathable**—Cured SEC2401 waterproofs with high vapor permeability for building moisture management.
- **Enduring Flexibility**—SEC2401 forms a translucent membrane that does not harden, crack or peel.

Application

- **Primerless Adhesion**—Adheres without a primer to many common construction substrates including: glass, brick, concrete, stucco, masonry, wood, copper, EIFS, aluminum, natural stones and many painted surfaces.
- **Fast Cure**—Achieves skin-over in under 30 minutes and is tack free in 2-4 hours under most conditions.
- **Versatile**—Easily applied using brush, roller, or airless spray.

Aesthetics

- **Natural Surface Protection**—Thin film application allows the natural substrate to be visible through the coating.
- **Light Transmission**—Waterproofs while still allowing the passage of light in applications such as glass block or sky lights.
- **Long Term UV Resistance**—Once cured, SEC2401 has the ability to withstand appearance changes such as yellowing or loss of translucency.
- **Anti Graffiti**—Defends against non mechanical vandalism and graffiti; most paints and inks can be easily removed with appropriate cleaners.

Potential Applications

SEC2401 is an architectural mastic coating that, when applied as a thin film, cures to form a continuous waterproof membrane that is flexible, vapor permeable and allows visibility to the substrate beneath. It is a candidate for use in vertical and horizontal applications where:

- Significant appearance change is undesirable such as brick, stucco, EIFS, painted surfaces, and others.
- Where light transmission through the substrate is required such as glass block walls, skylights, shelters, etc.
- Anti graffiti performance is desired. SEC2401 resists graffiti; typical paints and inks can be removed without damaging the coating.

Packaging

SEC2401 is available in 5 gallon steel pails containing 39-lb (17.7 kg), approximately 4.8 gallons (18.2 L).

Typical Physical Properties

Typical property values of SEC2401 as supplied and cured are set forth in the tables below. Typical product data values should not be used as specifications. Assistance with specifications is available by contacting MPM.

Typical Properties – Supplied

Property	Value	Test Method
Specific Gravity (lb/gal)	8.17 (.97 g/ml)	WPSTM P-15
Solids Content, by volume	73%	WPSTM C-19
Solids Content, by weight	70%	WPSTM C-19
Tack Free Time	2 hours	WPSTM E-86
Skin Over Time, mins	<30 minutes	
Viscosity, centipoises	10,400	WPSTM C-560
Application Temperature Range	40-120°F (5-39°C)	
Volatile Organic Content (VOC, g/L)	238	EPA Meth. 24

Typical Properties – Cured⁽¹⁾

Property	Value	Test Method
Tensile Strength, psi	148	ASTM D-412
Elongation %	205	ASTM D-412
Service Temperature Range	40-120°F (5-39°C)	
Coverage Rate	117 ft ² /gal max	Calculation
Vapor Permeance (10 mils DFT)	13.5 Perms (8.9 metric)	ASTM E96 Wet cup

(1) WPSTM = Waterford Plant Test Method

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

Installation

Project Mock-Up

Prior to beginning a coating project, the installer is strongly encouraged to perform a mock-up, or test patch on actual project substrates. The mock-up can be used:

- To verify that acceptable adhesion is attained with the proposed cleaning procedures. For warranty purposes, adhesion testing must be performed on all substrates to be coated.
- To identify coverage rates based on the actual project substrates and conditions. Coverage rates may vary between first and second coats, depending upon the specific substrates.
- For visual evaluation of the appearance. Obtaining customer acceptance of the appearance is strongly recommended.

Surface Preparation

Surfaces to be coated must be clean, dry, structurally sound and free of loose particles, dirt, dust, rust, oil, frost, mildew, and other contaminants. For most applications, cleaning with a high-pressure water wash should prove sufficient. Allow sufficient time after cleaning for the substrate to dry completely prior to the application of SEC2401 as coating a damp or wet surface may interfere with adhesion.

- Cracks and holes must be filled if greater than 1/16 inch (1 mm) wide. Cracks can be filled with GE SilPruf* or SCS2800 silicone sealants. Repairs to cracks and holes should match the existing substrate as closely as possible in texture and color since the SEC2401 has no hiding power.
- For masonry surfaces, if efflorescence and chalk is present, the surface may need to be treated with an efflorescence inhibiting masonry primer. Testing is recommended.
- Existing non-adhered painted surfaces should be removed back to the original surface or to a sound condition and cleaned as above. This may result in a non uniform appearance which may need to be addressed prior to application of SEC2401.
- New concrete and masonry should be allowed to cure for a minimum of 30 days after which the surface should be cleaned by wire brushing loose mortar and then cleaned via pressure washing.
- Non-porous substrates (steel, aluminum, galvanized metal) can be cleaned with an appropriate solvent if necessary.

Application Temperature and Humidity

Coating is best applied when the temperature is above 40°F (4°C) as frost or moisture are less likely to be present on the surfaces to be sealed. However, SEC2401 can be applied in colder temperatures under certain conditions; refer to the MPM technical bulletin “Cold Weather Sealing Guidelines” for additional information.

Surface temperature of the substrate to be coated should be below 120°F (49°C).

SEC2401 needs atmospheric moisture to properly cure and cure speed will vary relative to ambient temperature and humidity.

Film Thickness

On vertical surfaces, SilShield SEC2401 should be applied in 2-coats yielding minimum Dry Film Thickness (DFT) of 10 mils (254 microns). On smooth, non-textured, non-porous surfaces, each coat should be applied at 7 wet mils to obtain a minimum DFT of 5 mils (127 microns). Keep in mind during the curing process the DFT is approximately 25% less than the applied wet film thickness. Subsequent coats may be applied when the previous coat is dry to the touch or is firm enough to resist disturbance when rolling or brushing (typically less than 2 hours for 6-8 mils, longer time may be required for thicker coats). On horizontal surfaces, SEC2401 may be applied in one coat up to a DFT of 20 mils (508 microns).

Coverage

Maximum possible coverage rate at 10 mils (25 microns) DFT is 117 ft²/gallon. Actual coverage rates should be verified using a mockup and will vary based on substrate texture, porosity, application method, applicator and other factors. Final DFT less than 10 mils (254 microns) is not warrantable. As it may result in inadequate performance.

Installation—continued

Application Methods

SilShield SEC2401 silicone elastomeric coating can be applied using rollers, power rollers, brushes, or power sprayers. Rollers should be solvent resistant and utilize the minimum nap possible that still achieves continuous coverage. Achieving the most consistent coating thickness possible is important for final appearance. Varying coating thicknesses can lead to a mottled appearance as the coating begins to appear milky in areas where the thickness is increased. Please contact a technical representative for power roller and power spraying recommendations. Clean-up of equipment containing uncured material may be accomplished by flushing with mineral spirits. SEC2401 should not be left in pumping equipment and hoses for prolonged periods of time unless all hoses, piping connections and pump seals are vapor locked and lined/sealed with TEFLON® or similar treatment. SEC2401 cures by reacting with moisture so equipment without adequate lining and seals will transmit sufficient moisture vapor to gradually form cured material on hose walls and connections, resulting in increased operating pressures and material flow restrictions.

Applicable Standards

ASTM D6578 Standard Practice for Determination of Graffiti Resistance.

Technical Services

Additional technical information and literature is available from MPM. Laboratory facilities and application engineering is available upon request from MPM. Any technical advice furnished by MPM or any representative of MPM concerning any use or application of any sealant 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 Momentive Performance Materials (MPM) products and make their own determination as to fitness of use in their particular applications.

SEC2401 is not recommended for use on walking surfaces and may contribute to a slipping hazard, particularly when wet. Drip edges at parapets, overhangs, sills, intersections, etc should be considered to minimize visual effects from runoff. SEC2401 is also not recommended for use in locations subject to continuous water immersion. It may be difficult to achieve adhesion of non-silicone paints to overcoat SEC2401. It should not be applied to:

- Concrete surfaces which contain residue from oil or other bond breaking contaminants that may interfere with adhesion.

- Building materials which might bleed oil or solvents. These include but are not limited to: impregnated wood and certain vulcanized rubber gaskets or foams, tapes or failed sealants and caulking compounds. Compatibility testing is available.
- Unprepared surfaces including but not limited to those which are wet, dusty, oily, mildewed, heavily chalked, blistered or otherwise structurally unsound.
- Surfaces where adhesion performance and coating appearance has not been verified by adequate testing. A mock-up is strongly recommended to verify coverage rates, performance and appearance on any given substrate(s).
- Light transmission applications where clear sight through the substrate is required.
- Applications where the owner has not visually accepted the appearance of the product on actual project substrates through the use of a mockup or other sampling methods.

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.

SEC2401 SilShield Optic 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 MPM representative. Use of other materials in conjunction with MPM sealants products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

Customer Service Centers

Americas	+1 800 295 2392 +1 704 805 6946 Email: 4information@momentive.com
Europe, Middle East, Africa, and India	+00 800 4321 1000 +40 212 044229 Email: 4information.eu@momentive.com
Asia Pacific	Japan 0120 975 400 +81 276 20 6182 China +800 820 0202 +86 21 3860 4892 All APAC +60 3 9206 1543 Email: 4information.ap@momentive.com
Visit us at www.ge.com/silicones	

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