



SilShield* 3100

Silicone Architectural Coating

Product Description

GE SilShield 3100 silicone architectural coating is a low VOC silicone elastomeric coating used in horizontal and vertical above-grade waterproofing applications. SilShield 3100 coating cures to a durable, watertight and weatherproof barrier, and offers extreme resistance to fading, chalking, or degradation from natural weathering.

Key Features and Typical Benefits

Performance

Silicone Durability—Excellent long-term resistance to ultraviolet radiation, natural weathering, humidity, and high and low temperatures with negligible change in color or elasticity.

Silicone Compatibility—Compatible with all GE neutral-cure silicone sealants and pre-cured silicone weatherstrip.

System Warranty—Qualifies for a combined product warranty when used with GE UltraSpan* pre-cured weather-strip and the GE SilPruf* sealants.

Breathable—Cured SilShield 3100 coating is vapor permeable.

Application

Primerless Adhesion—Adheres to a broad range of porous and non-porous substrates including: glass, concrete, stucco, masonry, urethane foam, wood, copper, EIFS, aluminum and many painted surfaces.

Fast Cure—Can attain skin-over in under 30 minutes and be tack free in less than 2 hours under typical conditions.

Ease of Application—Can be applied brush, roller, or airless spray. Product body helps prevent sagging.

Low Temperature Storage—SilShield 3100 coating can be stored during colder months without risk of freezing.

Aesthetics

Excellent Color Retention—High resistance to chalking or fading due to natural weathering and UV exposure, even dark colors.

Easily Cleaned—Surfaces can be cleaned by simple pressure washing or with a mild soap and water mixture.

Color Flexibility—Available in nearly unlimited array of custom colors or in 77 pre-matched colors in the Color Selection Guide fan deck.

Potential Applications

SilShield 3100 architectural coating is a mastic coating that can be considered for use as a waterproofing coating in:

- Vertical, horizontal and roof applications to cover holes and minor cracks and to conceal surface irregularities.
- Non-traffic horizontal and roof applications.

Note: While primerless adhesion to many substrates is possible, adhesion should always be verified by testing a small area prior to initiating the project.

SilShield 3100 coating should not be considered for use on walking surfaces, as such use may contribute to a slipping hazard, particularly when wet. SilShield 3100 coating should also not be considered for use in locations subject to continuous water immersion. It may be difficult to achieve adhesion of non-silicone paints to overcoat SilShield 3100 coating. Additionally, this product should not be considered for:

- 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.



Potential Applications—continued

Surfaces where adhesion performance and coating appearance has not been verified by adequate testing. A mock-up is recommended to verify coverage rates and hiding power on any given substrate(s).

Packaging

SilShield 3100 silicone elastomeric coating is currently available in 52-lb (23.6 kg) approx. 5.1-gal net plastic pails.

Colors

SilShield 3100 coating is made to order and tinted at the manufacturing facility. Standard colors can be selected from a pre-matched Color Selection Guide fan deck or custom color matching can be performed.

Typical Physical Properties

Typical physical property values of SilShield 3100 coating, as supplied and cured, are set forth in the tables below. Assistance with specifications is available by contacting MPM.

Typical Physical Properties—Supplied⁽¹⁾

Property	Value	Test Method
Specific Gravity, lb/gal	13.3 (1.35 g/ml)	WPSTM P-15
Density, lb/gal	13.3 (1.30 g/ml)	WPSTM P-14
Solids Content, % by volume	72	WPSTM C-19
Solids Content, % by weight	76	WPSTM C-19
Tack Free Time, hours	<2	WPSTM E-86
Skin Over Time, mins	30	
Viscosity, cps	20,000	WPSTM C-560
Volatile Organic Content (VOC), g/L	34	EPA Meth. 24

Typical Physical Properties —Cured⁽¹⁾

Property	Value	Test Method
Tensile Strength, psi	245	ASTM D-412
Elongation, %	395	ASTM D-412
Application Temperature Range	32-120°F (0-49°C)	
Coverage Rate	106 ft ²	Gallon Max.
Vapor Permeance (10mils DFT)	8.40 Perms	ASTM D-1653

(1) 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, it is highly recommended that the installer 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 appearance and color acceptance.
- To verify that sufficient hiding power is attained using the combination of new coating over existing substrate(s). (This is especially applicable when coating over darker substrates with lighter colors.)

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 SilShield 3100 coating as application to a damp or wet surface may interfere with adhesion.

- Cracks and holes must be filled if greater than 1.59mm (1/16 inch) wide. Cracks and holes can be filled with GE SilPruf* silicone sealants.
- 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 down to the original surface or to a sound condition, and cleaned as above prior to coating.
- 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

Ambient temperature should be above 32°F (0°C). Surface temperature of the substrate to be coated should not exceed 120°F (49°C).



Installation—continued

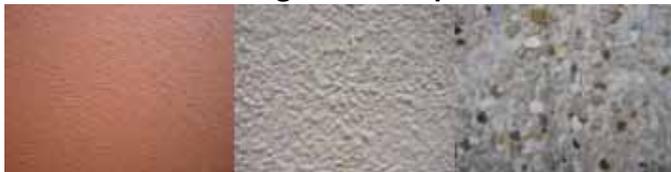
Film Thickness

On vertical surfaces, SilShield 3100 silicone elastomeric coating 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 8 wet mils to obtain a minimum DFT of 5 mils (127 microns). Note that during the curing process the DFT will become approximately 30% 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, SilShield 3100 coating may be applied in one coat up to a DFT of 20 mils (508 microns).

Coverage

Maximum possible coverage rate at 10 mils (254 microns) DFT is 106 ft² (9.8 m²)/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 coating DFT thicknesses less than 10 mils (254 microns) are not warrantable. Thicknesses less than 10 mils (254 microns) may result in inadequate performance, non-uniform color and diminished hiding power.

Substrate Surface Roughness Examples



Smooth Medium Coarse

Application Methods

SilShield 3100 silicone elastomeric coating can be applied using rollers, power rollers, brushes, or airless power sprayers. Rollers should be solvent resistant and have a nap of 3/4 to 1 1/2-inch (19 mm to 38 mm) in order to achieve the recommended coverage. Please contact a technical representative for power roller and power spraying recommendations. Removal of uncured product from equipment may be accomplished by flushing with mineral spirits.

NOTE: Paint or lacquer thinner is not an effective cleaning agent for SilShield 3100 coating in spray pumps and/or hoses. SilShield 3100 coating should not be left in pumping and spraying equipment or 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. As SilShield 3100 coating cures by reacting with moisture, equipment without adequate lining and seals can transmit sufficient moisture vapor to gradually form cured material on hose walls and connections, resulting in increased operating pressures and material flow restrictions.

Technical Services

Additional technical information and literature may be 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 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

This product 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 recommended to verify coverage rates and hiding power on any given substrate(s).

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.siliconeforbuilding.com 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.



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