



# Enduris\* 3400

## Silicone Roof Coating

### Product Description

GE Enduris 3400 silicone roof coating is a liquid applied one-part silicone coating that is an excellent candidate to consider for use in roofing applications as the weathering coat over a variety of roofing materials including spray applied polyurethane foam, water-borne coatings (acrylic), PVC membranes, and galvanized/coated metals. Enduris 3400 silicone roof coating forms a durable, breathable, watertight and weatherproof barrier that is extremely resistant to degradation from natural weathering.

### Key Features and Typical Benefits

- **Lowers Energy Costs**—Optimal air & water-resistive barrier performance throughout the life of the building; lowers energy costs and provides a barrier to reduce rot, rust, mold and other water-related issues.
- **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.

- **Ample Work Life**—Long work life provides sufficient time for treatments such as application of granules.
- **Accelerated Cure Rate**—Quickly attains its weather resistant properties.
- **Low Temperature Storage**—Storage may occur in unheated warehouses during the cooler months without the risk of freezing.

### Potential Applications

- **Silicone Durability**—Once cured, silicone rubber exhibits excellent long-term resistance to natural weathering including: extreme temperatures, ultraviolet radiation, rain and snow, with negligible change in elasticity.
- **Versatile Application**—Enduris 3400 is a one-part liquid applied silicone material that requires no mixing and can be applied by spray, roller or brush.
- **Ease of Use**—Low spraying viscosity permits easy spraying with most commercially available spray equipment while high static viscosity facilitates the material remaining where it is applied in areas of high pitch, vertical walls or parapets until full cure is achieved.

### Packaging

Enduris 3400 is currently available in steel pails containing 5 US gallons (18.9 liters) or steel drums containing 50 US gallons (189.3 liters).

### Colors

This product is currently available in 4 colors:

<u>Grade</u>	<u>Color</u>
SCM3402 .....	White
SCM3404.....	Medium Grey
SCM3405.....	Tan
SCM3408.....	Dark Grey

## Typical Physical Properties

Typical physical property values of Enduris 3400 silicone roof coating as supplied and cured are set forth in the tables below.

### Typical Properties – Supplied

Property	Value <sup>(1)</sup>	Test Method
Density	10.45 lbs/gal (1.25 g/ml)	WPSTM P-14
Solids Content, Volume	Δ%	WPSTM P-19
	Weight	85%
Tack Free Time	45 Minutes	WPSTM E-86
Skin-Over Time	30-40 minutes	WPSTM C-560
Viscosity	4360 centipoises	WPSTM C-560
Tensile Strength	190 psi (1.31 MPa)	ASTM D 412
Elongation	213%	ASTM D 412
Hardness, Type A Indentor	37 ±3	ASTM D 2240
VOC	228 g/L	EPA Method 24
Solar Reflectance <sup>(2)</sup>	0.82	ASTM C 1549
Thermal Emittance <sup>(2)</sup>	0.91	ASTM C 1371
SRI Value	90	ASTM E 1980

(1) Typical properties are average data and are not to be used as or to develop specifications.  
(2) Values derived from testing on SCM3402 (white).

## Installation

Enduris 3400 silicone roof coating can be applied over numerous roof systems. Please contact the specific roof system manufacturer for details related to the underlying roof system being coated.

### Surface Preparation

Enduris 3400 can be applied to itself and to most other silicone roof coatings as well as a variety of roofing materials, such as, but not limited to: spray applied polyurethane foam, water-borne coatings (acrylic), PVC membranes, galvanized/coated metal, and common parapet/coping materials. Roof surfaces must be clean, dry, structurally sound and free of loose particles, dirt, dust, oil, frost, mildew and other contaminants. Damage to the underlying roof system, such as cracks, openings, holes, etc. should be properly repaired prior to application of Enduris 3400. Contact Momentive Technical Services for recommendations on proper cleaning methods.

When recoating coated roofs, the existing coating may have to be power washed with an appropriate detergent and rinsed to remove cleaning solution.

Surfaces that are designed to prevent ponding of water are preferred to ensure proper performance of Enduris 3400.

Prior to application of coating, the installer should verify that acceptable adhesion is attained to the existing roofing materials to be coated. This is typically performed with a mock-up using the cleaning and surface preparation procedures under consideration. Coating should not proceed until mock-up testing has been completed.

## Application Guidelines

Enduris 3400 is supplied ready to use and should not be diluted with solvent prior to application. If settling in the package has occurred, stirring or shaking can be employed to properly mix the coating.

For spray application, it is recommended that Enduris 3400 be sprayed in multiple coats applied in multi-directional (e.g. North-South, East-West) passes to ensure uniform build and to avoid the potential for pinholes. Final cured film thicknesses must be free of voids, pinholes, cracks or blisters.

Care should be taken to avoid overspray onto adjacent building materials, vehicles, plants, etc. Overspray can be cleaned up before it has cured by wiping alternately with solvent and dry rags. Cured material can be removed from surfaces with a razor blade, or scrubbed off with synthetic abrasive pads and solvent. To control overspray, avoid spraying in winds that may cause overspray drift. Surfaces not intended for coating should be masked or covered.

## Application Temperature

Ambient temperature should be above 40°F (4°C). Lower temperatures will lengthen the skin over, tack free, and ultimate cure time. Frost and/or moisture can also develop which may interfere with adhesion of the coating to the substrate. As temperatures increase, the cure and working time of the coating will decrease which will shorten the time for application of granules.

## Application Equipment

Enduris 3400 can be applied by employing rollers, brushes or spray equipment. For roller application, solvent resistant phenolic core rollers are recommended. For spray application, Enduris 3400 works in most types of commercially available spray equipment. Contact a Momentive technical services representative for equipment recommendations.

Cleanup of spray equipment containing uncured material may be accomplished by flushing with mineral spirits or other suitable solvent. Enduris 3400 cures by reacting with moisture and should not be left in pumping equipment and hoses for prolonged periods unless equipment contains moisture lock hoses, fittings and seals. Equipment without these components may transmit sufficient moisture vapor to gradually form cured material on hose walls and at unsealed connections potentially causing an increase in operating pressure and material flow restriction.

## Installation—continued

### Application Thickness

Enduris 3400 should be applied in a minimum of two coats with total combined dry film thickness of >24mm as follows to smooth surfaces:

**Base Coat:** Apply Enduris 3400 at a rate of 1.5 gallons per 100 sq. ft. Dry film thickness should be a minimum of 12 mils. Allow base coat to cure before proceeding to the top coat.

**Top Coat:** Typical cure time between base and top coat should be 12 to 24 hours. Apply Enduris 3400 at a rate of 1.5 gallons per 100 sq. ft. Dry film thickness of top coat should be a minimum of 12 mils.

**Optional Granules:** As an optional finish, granules may be applied by casting them into the top coat while it is still wet. Contact the granule supplier or manufacturer for guidelines on rate of granule casting or whether additional film thickness is necessary.

Irregular surfaces may yield different application rates. Testing should be performed to determine actual application rates necessary to achieve proper mil thickness. For ease of application, utilizing different colors for the base coat and top coat is recommended in order to visually confirm coverage of layers.

### Coating Vertical Surfaces

When coating vertical wall surfaces other than parapets and walls associated or part of the roofing system being coated, GE SEC2400 SilShield\* Silicone Architectural Coating is recommended. Contact a Momentive representative for additional information.

### Limitations

Enduris 3400 is not intended not recommended for use on pedestrian or traffic bearing surfaces. Enduris 3400 is not recommended for substrates subjected to continuous water immersion. Inclement weather may negatively affect uncured Enduris 3400; therefore, application of coating should not proceed if heavy rain, hail, etc, is expected within 24 hours of applying. Enduris 3400 should not be applied to:

- Unprepared surfaces including but not limited to those that are wet, dusty, oily, mildewed, heavily chalked, blistered or otherwise structurally unsound.
- Building materials that might bleed oil or solvents. These include, but are not limited to, certain vulcanized rubber products, tapes, failed sealants, some caulking compounds and asphaltic/mastic materials.

- Totally confined spaces, as the coating requires ventilation to allow for evaporation of solvent and atmospheric moisture for completion of cure.
- Surfaces where adhesion has not been verified by adequate testing.

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

### Applicable Standards

- ASTM D 6694-08: Standard Specification for Liquid-Applied Silicone Coating used In Spray Polyurethane Foam Roofing Systems
- FM approved uses: Cover, Liquid Applied Coat/Base Coat/Top Coat
- UL R5346 Roof Coatings, Construction No. 136

### 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 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](http://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.

### Storage

Enduris 3400 should be stored in unopened containers and protected from exposure to direct sunlight and high heat. Store containers below 80°F (27°C) to maintain full shelf life.

## Customer Service Centers

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

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