MOMENTIVE™

GE Enduris* 3500
High Solids Silicone Roof Coating

INSTALLATION GUIDE SPECIFICATION FOR
GRANULATED OR SMOOTH MODIFIED BITUMEN / BUR
(10 YEAR WARRANTY)

PART 1–GENERAL

1.01 SUMMARY

A. This specification provides a remedial coating system for application over smooth and mineral surfaced modified bitumen roof covers and smooth built-up roof membranes (BUR). The use is restricted to circumstances where the roof surface is in sound condition, but requires a renewal of the membrane surface due to the normal effect of aging and use.

B. Enduris 3500 silicone roof coating, manufactured by Momentive Performance Materials, Inc. (MPM), is a high solids, solvent-free, alkoxy-based silicone roof coating which moisture cures to a durable, breathable, waterproof barrier which is highly resistant to degradation from UV and natural weathering. Enduris 3500 silicone roof coating may be used to top coat existing granulated or smooth modified bitumen roofs, for restoration and longevity.

C. Scope: Installation of Enduris 3500 silicone roof coating, labor and accessory materials.

D. Exclusions: This guide specification does not include: repair or replacement of roof accessory items such as vents, expansion joints, drains, penetrations and mechanical equipment; evaluation and correction of roof load capacity or wind uplift resistance.

1.02 SUBMITTALS

A. Product Data: Technical Data Sheets (TDS) and Safety Data Sheets (SDS) for all products used on project.

B. Shop Drawings: Drawings indicating scope of work and roofing details.

C. Sample Warranty (optional; see Section 1.06).

1.03 QUALITY ASSURANCE

A. Manufacturer Qualifications: Enduris 3500 high solids, silicone roof coating supplied and manufactured by MPM are approved for and shall be used on this project. Upon request, MPM will provide certification that all MPM materials meet the physical properties required by the specification.

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B. Adhesion Test: Prior to estimating coating restoration project, conduct an adhesion test in accordance with MPM adhesion testing procedures to determine if a primer or other specific surface preparation is required.

C. The silicone coating manufacturer shall have a minimum of 20 years' experience in the manufacture of silicone roof coatings and be ISO 9001 certified. The coating shall have an Underwriters Laboratories (UL) Listing, Factory Mutual (FM) Class 1, 4470 Approval and a Miami-Dade NOA (Notice of Acceptance).

D. Contractor Qualifications: The contractor shall be approved by MPM and eligible to offer a GE Enduris Silicone Labor & Material Warranty.

E. Deviations: Any deviation from this specification must be approved in writing by MPM.

F. Field Quality Control: Upon completion of the roof coating project, an inspection by MPM's designated third-party inspection agency may be required. Consult with MPM for specific requirements.

1.04 DELIVERY, STORAGE AND PROTECTION OF MATERIALS

A. Delivery: All products shall be delivered in the original, factory-sealed drums, pails or other containers. All product containers shall be labeled with the manufacturer's name and address, product name and description, product date/expiration date and batch/lot number.

B. Materials damaged during shipment, delivery or storage shall not be used on this project without approval of MPM.

C. Handling and Storage: Store Enduris 3500 silicone roof coating containers between 15°F and 109°F (-9°C to 43°C). Other materials shall be stored in accordance with the appropriate material's TDS. Keep all products out of direct sunlight and protected from extreme temperatures.

D. SDSs and TDSs for all materials used on this project will be kept on site and reviewed by appropriate personnel before use.

1.05 GENERAL SITE CONDITIONS

A. All mechanical units, skylights, vents and other protrusions and other rooftop accessories should be in place prior to surface preparation and coating application.

B. All mechanical units should be adjusted or shut down to prevent fumes and odors from entering the facility.

C. Mask or otherwise protect all surfaces not to be prepared and/or coated to prevent overspray damage. Use wind screens as appropriate.

D. Review existing and imminent weather conditions (including potential for extreme temperatures, relative humidity, frost, dew, and precipitation) to assure that coating and accessory material will have sufficient curing time.

E. Temperature at the time of application of the Enduris 3500 silicone roof coating application should be above 0°F (-18°C) to allow coating to cure properly. Contact manufacturer if applying to substrates over 120°F (49°C).

F. Apply Enduris 3500 roof coatings only to clean, dry and secure surfaces.

G. Protect Enduris 3500 roof coating from foot traffic or other potential abuse during the curing process. The coating is considered cured when it is tack free and sufficiently durable to withstand roof traffic.

H. All work performed under this specification must be in accordance with all appropriate local, state and federal regulations.

I. While cured Enduris 3500 roof coating is unaffected by ponding water conditions, various professional roofing associations (including NRCA) consider ponding water undesirable and recommend that roofs be designed for positive drainage. Corrective action should be considered, prior to application of Enduris 3500 roof coating, to correct existing ponding conditions and/or drainage deficiencies.

1.06 WARRANTY INFORMATION

A. A manufacturer's limited labor & material warranty is available on eligible projects. Contact MPM Technical Support for details.

B. Limited warranties are not available for continuous immersion service; cryogenic, freezer or cold storage facilities; or over existing wet roofing materials. Other limitations may apply.

C. Inspections: Warranted projects are subject to:

1. Pre-job inspection and adhesion test.
2. Final quality control inspection.
3. Inspections may be performed by MPM or its designated third-party inspectors at MPM's discretion.

D. Warranty submittals

1. MPM Warranty Pre-Approval Application
2. Adhesion test results

PART 2 — PRODUCTS

2.01 SILICONE COATING

A. Enduris 3500 high solids, solvent-free, alkoxy-based, moisture-cured, silicone roof coating supplied and manufactured by Momentive Performance Materials, Inc., Waterford, NY.

B. Physical Properties shall be tested in accordance with ASTM D6694 as indicated in the table below.

Property	ASTM	Value
Tensile Strength	D2370	200 psi min
Elongation at Break (73°F)	D2370	500% min
Volume Solids	D2697	90% min
Weight Solids	D1644	90% min

2.02 ASPHALT BLEED BLOCKER

A. GE Asphalt Bleed Blocker, Momentive Performance Materials, Waterford, NY. Refer to the GE Asphalt Bleed Blocker Technical Data Sheet for physical property information.

2.03 SEAM TREATMENT MATERIALS

A. GE Enduris Silicone Seam Sealant, Momentive Performance Materials, Waterford, NY. Refer to the Enduris Seam Sealant Technical Data Sheet for physical property information.

B. GE UltraSpan* UST / USM pre-cured silicone transition sheets and molded corners, Momentive Performance Materials, Waterford, NY. Refer to the UltraSpan Technical Data Sheet for physical property information.

C. Reinforcement Fabric: GE RF100 series is a 100% polyester spun-laced textile reinforcing fabric that is available in 4", 6" or 12" widths. Refer to the RF100 Technical Data Sheet for physical property information.

2.04 ACCESSORY MATERIALS

A. Traffic Mats: Yellow Spaghetti (manufactured by Western Plastics, Inc. 800-325-3605) pressure bonded, non-woven pads (or in rolls) made of spaghetti-like strands of flexible polyvinyl chloride (PVC), nominal thickness 5/16".

B. Yellow Walkway Coating: GE SEC2400 Protection Yellow silicone coating.

PART 3 — EXECUTION

3.01 SURFACE PREPERATION BUR

A. The surface must be clean, sound, dry and free of any materials that would inhibit proper adhesion of the coating or sealant. Achievement of this condition may require the use of cleaner, scraping, power brooming, vacuuming or other means, and shall always be performed observing responsible trade practices.

B. Rinse entire roof with power washer.

C. Any poorly adhered existing coating must be removed with a pressure washer and clean tap water. Any coating that remains that is well adhered is allowable.

D. Required repairs to be executed in accordance with "Repair Manual for Low-Slope Membrane Roof Systems", published by National Roofing Contractors Association, NCRA.

E. Coat entire roof with GE Asphalt Bleed Blocker at a rate of minimum one (1) gallon per 100 square feet.

E. All blisters shall be cut, dried out, re-adhered and sealed with appropriate Enduris Seam Sealant or approved equal. After allowing sealant to dry, apply Enduris 3500 silicone roof coating and GE RF100 polyester reinforcing fabric as described below.

F. Reseal around all mechanical equipment and roof penetrations with GE Enduris Silicone Seam Sealant or Enduris 3500 basecoat and RF100 polyester reinforcing fabric.

G. All loose seams, ridges and other membrane deficiencies of existing roof system shall be fastened down and sealed. Sealant must seal fasteners as well.

3.02 COATING APPLICATION

A. The Enduris 3500 roof coating shall be applied uniformly in one or more coats at a theoretical application rate of 1.5 gallons/100 ft^2 to achieve a WFT (wet film thickness) of 24 mils and a minimum total DFT (dry film thickness) of 21 mils. NOTE: Theoretical coating application rate is based strictly on minimum wet film thickness requirements and must be increased for site-specific conditions such as surface texture, overspray loss, container and other residues, application technique and environmental conditions.

B. Required final DFT is 21 mils minimum on any given area of the roof surface. Apply additional coating as needed to meet this requirement.

C. Additional coats: When additional applications of coating are needed, allow sufficient cure time between applications to provide a stable working surface. Subsequent coating should be applied in a spray, roller or brush pattern perpendicular to the previous application.

D. Equipment: Enduris 3500 silicone roof coating may be applied by spray equipment, roller, brush or gauge rake.

E. Cure: Enduris 3500 silicone roof coating cures by reacting with ambient moisture. Cure time will be reduced at elevated ambient humidity and temperatures.

3.03 FINISHED COATING CHARACTERISTICS

A. The cured Enduris 3500 silicone roof coating should be monolithic and seamless, encapsulating the entire existing surface. The coating should be free of holidays, voids, pinholes and cracks. Apply additional coating as necessary to correct defects.

B. Minimum cured coating thickness is 21 mils DFT.

3.04 SAFETY REQUIREMENTS

A. Refer to appropriate SDSs for additional safety information.

B. Before starting to apply coating, primers or other materials, any potential sources of air entry into the building must be sealed off.

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Warranty Program for GE Enduris Silicone Coatings

GE Enduris 3500 High Solids Silicone Roof Coating

3.05 CLEANUP

A. Keep all work areas clean, clear and free of debris at all times.

B. Do not allow trash, waste or debris to accumulate on the roof. Remove these items from the roof on a daily basis.

C. Collect and properly store all tools and unused materials at the end of each workday.

D. Dispose of or recycle all trash and excess material in a manner conforming to current EPA regulations and local laws.

E. Properly clean the finished roof surface after completion and make sure the drains and gutters are not clogged.

F. Clean and restore all damaged surfaces to their original condition.

3.06 QUALITY CONTROL

A. Enduris 3500 silicone roof coating restoration projects are subject to pre-job,progress and final inspections by MPM, its designated third-party inspectors, or others subject to warranty requirements and contract documents.

Licensed Products

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