

METHOD OF STATEMENT

ROOF RESTORATION – BITUMEN MEMBRANE (SMOOTH OR GRANULAR) ENERFLEX SP 300

PART I – GENERAL

1.01 RELATED DOCUMENTS

- A. General Requirements of Division 1
- B. Related Sections – Masonry and Concrete

1.02 DESCRIPTION

- A. Roof restoration of existing bitumen membrane using white and reflective, **100% Silicone Roof Coating System**
- B. This system provides a durable waterproof membrane over existing smooth or granular bitumen membrane

1.03 SUBMITTALS

- A. Approved applicator letter from the manufacturer (if applicable)
- B. Material submittal, Technical data sheet and flashing details
- C. Sample of fleece top EnerSeal Tape (if applicable)

1.04 QUALITY CONTROL

- A. Comply with manufacturer's application instructions
- B. Manufacturer's application instructions are binding for all phases of work including substrate preparation, application of materials and protection of adjacent surfaces
- C. Adhesion Peel Test must be completed and documented in various areas of the roof deck prior to installation of any primer or coating

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Package labels must be clearly visible on all pallets and materials
- B. Store all materials in covered and protected environment
- C. Store all materials at recommended temperature, appropriate for the time of the year, when materials are being installed
- D. All materials must be stored in dry environment, within a temperature range of 50°F to 89.6°F (10°C to 32°C)

1.06 CODE REQUIREMENTS

- A. The contractor must follow local and country codes as well as safety regulations

1.07 WARRANTY

- A. Product / Material Warranty
- B. Product / Material Warranties are applicable only on completed roof projects for the entire roof area

PART II – PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. ENERCON

2.02 MATERIALS

- A. Roof Restoration System – Material Quantities & Coverage
 - Ener-Prime 111 at 860 ft²/pail (80 m²/pail) for a pail of 10 Kg
 - EnerFlex SP 300 at 194 ft²/pail (18 m²/pail) at 1mm DFT for a pail of 4.75 Gal
 - EnerSeal Tape – Nano Seal Technology at 50 ft/roll (15.2 m/roll)
- B. Physical properties of EnerFlex SP 300 (Liquid Silicone)
 - Density 1.36 gr/cm³
 - Viscosity 6,000 - 8,000-cps
 - Tensile Strength 220
 - Elongation at Break 250%
 - Hardness – Shore A 40
 - Water Vapor Permeability 10.2
 - VOC
 - Reflectivity 88
 - Emissivity 89
 - SRI 111
- C. Related Material (If required)
 - EnerSeal XB (Flashing Sealant) – Sausages
 - Polyester reinforcement fabric - Rolls

PART III – EXECUTION

3.01 INSPECTION

- A. Evaluate the condition of existing bitumen membrane. Perform total inspection of all roof areas and penetrations. Note any areas of risk such as ponding and structural breaks
- B. All roof areas must maintain positive drainage with no ponding water areas. Ponding water is defined by the NRCA as “water that remains more than 48 hours after precipitation has stopped.” Drainage can sometimes be improved by adding extra drains, changing the slope of the structural deck, or removing existing insulation and roof membrane and reinstalling a tapered insulation and new roof membrane

3.02 WEATHER CONDITIONS & TEMPERATURE REQUIREMENTS

- A. Ambient temperatures must be at least 41°F (5°C) and rising before starting application and must not be higher than 122 °F (50°C)
- B. Existing bitumen membrane surface must be dry with no precipitation in the forecast for the next 48 hours. Start calculation of 48-hour dry time after all work is completed. Conditions with a relative humidity of higher than 55% will require additional time for coating to dry. High humidity, low temperatures, cloud cover and calm air will all slow down the curing process. Alternatively, low humidity, high temperatures, direct sun and wind will speed up the curing process
- C. Extra caution is needed when applying material in windy conditions. Never apply material with excessive wind

3.03 SURFACE PREPARATION & REPAIR

- A. Surface must be clean of all oils, water, dirt, and any debris
- B. Light pressure wash the existing bitumen surface and let the surface dry
- C. Perform random Peel off Testing to check the adhesion (if required)
- D. Ensure the existing bitumen membrane is bonded tightly with substrate
- E. Any debonded areas need to be cut for patch repairs using EnerSeal Fleece Top Tape – Nano Seal Technology
- F. Repair all damaged areas using EnerSeal Fleece Top Tape
- G. Ensure all bitumen overlaps are bonding properly
- H. For all curbs, base flashing, and wall flashing up to 12” (30 cm) high: including HVAC curbs, fan, evaporator, equipment mounts, pipe supports, vents and other penetrations use EnerSeal Fleece Top Tape by extending a minimum of 4” (10cm) on the horizontal roof surface
- I. Topcoat EnerSeal Tape with EnerFlex SP 300 at 1mm thickness and allow it to fully cure.

3.04 MEMBRANE APPLICATION

- A. Protection and Start-up procedures
 - 1. Post notices, minimum 48 hours prior to the work commencement, around the building and parking lots. Protect adjacent surfaces, where product is not to be applied, using masking tape, plastic / paper sheets, stretch wrap, tarps, or plywood, as appropriate
 - 2. The owner must be notified of the start time, so the fresh air inlets may be sealed off and/or HVAC units may be shut down
 - 3. The contractor must remove drain screens and seal or plug the drainpipes to prevent choking of drains, during the coating operation. Remove all seals or unplug drains and reinstall screens, after the work is completed for the day
- B. Apply Ener-Prime 111 in single-coat application at a coverage of 860ft²/pail (80m²/ pail)
- C. Ensure to follow recommendations, as atmospheric conditions might affect the mixing and curing times
- D. Generally EnerFlex SP 300 is applied in single coat but for enhanced durability and performance, EnerFlex SP 300 can be applied in 2 coats. This can be achieved by applying EnerFlex SP 300 at coverage rate of 387.5 ft²/pail (36 m²/pail) as first coat and then repeat the same as a second coat with cross hatch application. If skipping this recommendation proceed to point E below
- E. Apply EnerFlex SP 300 in single coat at the coverage rate of 194 ft²/pail (18 m²/pail) and allow 48 - 72 hours for coating to fully cure

3.05 JOB SITE CLEAN UP

- A. Remove all masking and protection
- B. Notify the owner about the application completion, so HVAC vents can be opened, and units restarted.
- C. Remove all roofing-related trash and debris from the job site
- D. Dispose all debris and trash in accordance with local regulations

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