

METHOD OF STATEMENT

CONCRETE ROOF RESTORATION

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 concrete deck using a white and reflective **100% Silicone Roof Coating System**
- B. This system provides a durable waterproof membrane over concrete roof surfaces

1.03 SUBMITTALS

- A. Approved applicator letter from the manufacturer (if applicable)
- B. Material submittal, technical data sheet and flashing details
- C. Sample of EnerSeal Tape fleece top (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, protection of adjacent surfaces and application
- C. Adhesion peel testing must be completed and documented in various areas of the roof deck, prior to application 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
- 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. Contractor must follow local and country codes as well as safety regulation

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 BRAND / MANUFACTURERS

- A. ENERCON

2.02 MATERIALS

- A. Roof Restoration System – Material Quantities & Coverage
 - 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 50 ft/roll (15.2 m/roll)
 - EnerSeal XB flashing sealant 600 ml sausage
- 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
 - ENERCON approved primer, if required after reviewing adhesion test results to improve adhesion
 - Polyester reinforcement fabric - rolls

PART III – EXECUTION

3.01 INSPECTION

- A. Perform detailed inspection of all roof areas and penetrations, to evaluate condition of concrete roof deck. Note any areas of risk such as ponding and structural breaks
- B. Entire roof 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 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. Before starting application, ambient temperature must be at least 41°F (5°C) and rising and must not be higher than 122 °F (50°C)
- B. Concrete deck 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 higher than 55% will require additional drying time. High humidity, low temperatures, cloud cover and calm air all will slow 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 & REPAIRS

- A. Concrete surface must be clean of oil, water, dirt, and any debris. Power-blow all dust from the concrete deck surface
- B. Any loosely held existing coatings must be removed using light pressure wash or shot blasting or grinding the surface
- C. In case of new concrete, it must be fully cured and all efflorescence or laitance must be removed either by power wash or grinding the surface, prior to coating application
- D. Perform peel off adhesion testing (if required)
- E. Repair all spalls and cracks in the concrete deck either by using EnerSeal Tape or EnerSeal XB
- F. Precast joints must be filled and troweled smooth using mortar
- G. 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

- H. Topcoat all areas repaired using EnerSeal Tape or EnerSeal XB with EnerFlex SP 300

3.04 MEMBRANE APPLICATION

- A. Protection and Start-up procedures
 - i. Post notices, minimum 48 hours prior to 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
 - ii. 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
 - iii. 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 ENERCON recommended Primer (only if required) as per the instructions and atmospheric conditions might affect curing time
- C. Generally EnerFlex SP 300 is applied in single coat, but for enhanced durability, EnerFlex SP 300 can be applied in two coats using polyester fabric in between the coats. This can be achieved by applying first coat of EnerFlex SP 300 at coverage rate of 387 ft²/pail (36 m²/pail) and apply polyester fabric while the first coat is still wet (get polyester fabric requirements from ENERCON). Then repeat the same as second coat with cross hatch application. If skipping this recommendation, proceed to point D below
- D. Apply EnerFlex SP 300 at a coverage rate of 194 ft²/pail (18 m²/pail) and allow coating 48–72 hours 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

Disclaimer ENERCON is not an Engineering or Architecture firm. Any inspection of the roof plans or inspection of the building's structural roof deck by ENERCON representatives shall not constitute any warranty by ENERCON of such plans, specifications, or construction. The sole purpose of any roof inspections carried out by ENERCON's representatives are to gain better understanding and knowledge of the existing roof conditions*