

METHOD OF STATEMENT

METAL ROOF RESTORATION

ENERFLEX SP 300

PART I – GENERAL

1.01 RELATED DOCUMENTS

- A. General requirements of Division 1
- B. Related sections – Sheet metal

1.02 DESCRIPTION

- A. Metal roof restoration using white and reflective **Liquid Silicone Roof Coating System**
- B. This system provides a durable waterproof membrane over metal roof

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. Perform peel off adhesion testing every 55-60 m² of the metal surface and document the results

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Package labels must be clearly visible on pallets
- B. Store all roll goods in a dry, protected environment
- C. Store coatings and mastics at recommended temperatures appropriate for time of year materials are being installed

1.04 CODE REQUIREMENTS

- A. Contractor must follow local and country codes as well as safety regulation

1.05 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 in 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
 - Ener-Prime 222, corrosion inhibiting primer, only to be used if there is corrosion on the metal surface
 - Polyester reinforcement fabric - rolls

PART III – EXECUTION

3.01 INSPECTION

- A. Perform detailed inspection of all roof areas, penetrations and drains to evaluate condition of metal roof. 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, altering the slope, or replacing existing damaged metal sheets with new metal sheets

3.02 WEATHER CONDITIONS & TEMPERATURE REQUIREMENTS

- A. Before starting application, ensure ambient temperature must be at least 41°F (5°C) and rising and must not be higher than 122 °F (50°C)
- B. Metal roof 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

- A. Metal surface must be dry and clean of any oil, dirt, or debris. Power-blow all dust from the metal surface
- B. Any loosely held coatings must be removed using light pressure wash or shot blasting or grinding the surface
- C. In case of low-to-mild rusting of metal panels, use wire brush or sanding paper for the rusted areas, rinse with water and let the surface to dry before primer application
- D. Use Ener-Prime 222 as corrosion inhibiting primer. Do not apply primer on wet or damp surfaces and do not apply primer when metal surface temperatures are over 122 °F (50°C)
- E. In case of mild-to-heavy rusting, replace corroded and deteriorated metal panels with new panels. Wash new galvanized panels with a 50% vinegar and water solution. All new panels should have matching profiles
- F. Remove and replace loose, missing, and stripped screw fasteners with new fasteners. New fasteners must be secure. Metal crickets must be installed on the high side of all curbs according to the original metal roof manufacturer’s specifications.

- G. Replace deteriorated drain gutters. Secure existing gutters to wall and/or roof. Slope gutters or add downspouts to eliminate ponding water in gutter.
- H. Eliminate all water ponding conditions in valleys and drain areas prior to coating application

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. Fasteners: Seal all fasteners using sealant EnerSeal SB or small patches of EnerSeal Tape. Allow 12-24 hours to cure before topcoat application
- C. Seams: Seal all vertical and horizontal seams, all roof penetration curbs and skylight joints using EnerSeal Tape – Nano Seal Technology. Allow 12-24 hours to cure before topcoat application
- D. Application of any of the primer is dependent on the results obtained by peel off adhesion test and rusting of metal roof
- E. Apply EnerFlex SP 300 in a single coat 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*