



Asphalt Restoration Aged BUR and Modified Bitumen Sample Design Guideline

ERSYSTEMS® OneStep Plus

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ASPHALT RESTORATION AGED BUR AND MODIFIED BITUMEN
SAMPLE DESIGN GUIDELINES – ONESTEP PLUS

PART 1 – GENERAL

1.01 DESCRIPTION

- A. This guideline includes the installation of the liquid applied modified silane coating to repair and restore aged Modified Bitumen single-ply membrane roofs and aged smooth asphalt BUR. The process effectively repairs cracks, splits and defects in the aged roof, protects the Modified Bitumen or BUR from further degradation, and renews the weathered surface to extend the useful life of the roof.
- B. Work included is labor, materials, equipment and accessories and related services to complete the application in accordance with guidelines and details as approved by ITW POLYMERS SEALANTS NORTH AMERICA, INC.
- C. Work excluded is replacement of roof accessories such as drains, vents and other penetrations and structural roof repair.

1.02 QUALITY ASSURANCE

- A. Manufacturer Qualifications: ITW POLYMERS SEALANTS NORTH AMERICA, INC. will furnish upon request, certification the material meets the physical properties stated in this guideline.
- B. Contractor Qualifications: All work to be completed must be done by an ITW POLYMERS SEALANTS NORTH AMERICA, INC. preferred applicator.
- C. No deviation from this guideline will be accepted without prior written approval of ITW POLYMERS SEALANTS NORTH AMERICA, INC.

1.03 SUBMITTALS

- A. Warranty pre-installation notifications are required prior to the installation of the warranted systems.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver material in original, unopened packages and containers.
- B. Containers are to be labeled with manufacturer's name, product name, description, and identification.
- C. Store materials in a dry area above 40°F (4.45°C) and below 80°F (26.7°C) protect from water and direct sunlight.
- D. Any materials damaged in handling or storage must not be used.
- E. Deliver SDS for each product. Consult SDS and Technical Data Sheet for each product used before beginning work.

1.05 JOB CONDITIONS (CAUTIONS AND WARNINGS)

- A. All mechanical equipment, vents, skylights, etc., should be in place before the roofing system is installed.
- B. Mechanical units (blowers, HVAC) should be prevented from distributing solvent fumes into the building.

- C. Coatings should be protected from traffic and other abuse until completely cured and installation is complete.
- D. Application of coatings with spray equipment may require some masking and possible erection of wind screens to prevent overspray and drift damage. Protect surfaces of unrelated areas from coatings and overspray possibilities.
- E. Application shall proceed to dry, clean surfaces only. In planning work consider environment and weather related conditions such as frost, mist, dew, condensation, humidity, and temperature. Temperature should be above 40°F (4.45°C), more than 5°F above the dew point and rising, for best application results.
- F. Sufficient safety belts and lines should be provided. A wet surface or a surface that is not thoroughly cured can be very slippery. All work environments should comply with current OSHA regulations.

1.06 WARRANTY

- A. ITW POLYMERS SEALANTS NORTH AMERICA, INC. warrants that materials provided are free from defects in manufacturing and will replace any material found to be defective.
- B. ITW POLYMERS SEALANTS NORTH AMERICA, INC. /Contractor Coating System Warranty is available through preferred contractors and at a cost. Consult ITW POLYMERS SEALANTS NORTH AMERICA, INC. for further details of the Warranty Program.

PART 2 - PRODUCTS

2.01 GENERAL

- A. The components of the coating system are to be products of ITW POLYMERS SEALANTS NORTH AMERICA, INC. or products approved by ITW POLYMERS SEALANTS NORTH AMERICA, INC. as compatible; or approved equal.

2.02 ERSYSTEMS® ONESTEP PLUS (White)

- A. See Technical Data Sheet

2.03 ERSYSTEMS® H.E.R.

- A. See Technical Data Sheet

2.04 FABRIC REINFORCEMENT: POLYESTER KNIT FABRIC

- A. See Technical Data Sheet

- 2.05 ASPHALT SUBSTRATE PRIMER: ERSYSTEMS® ACRYLIC ASPHALT PRIMER** is recommended to be used prior to the **ONESTEP PLUS** coating application. The use of this primer will reduce asphalt bleed through and improve coating adhesion.

- A. See Technical Data Sheet

2.06 RELATED MATERIALS

- A. Gap/Joint Sealant: **PERMATHANE® SM7108**
- B. Gap/Joint Sealant: **ERSYSTEMS® 2100 MS ADHESIVE SEALANT**

- C. Metal Primer: **ERSYSTEMS® POLYURETHANE METAL RUST PRIMER** or **PACIFIC POLYMERS® ELASTO-POXY PRIMER VOC**
- D. **ERSYSTEMS® QUICKET**: Pourable self-leveling repair sealant. Quickly builds cricket and a pourable sealer.

NOTE: See Technical Data Sheet for additional information and detailed instruction on each product.

PART 3 - APPLICATION

3.01 SUBSTRATE INSPECTION

- A. A proper substrate shall be provided to receive the ITW POLYMERS SEALANTS NORTH AMERICA, INC. coatings.
- B. The roof surface must be clean, dry, and free of ponding water, and over-all structurally sound.
- C. Inspect the roof surface for cracks, blisters, brittleness and alligating. Inspect flashing details. Determine which areas may not be watertight and in need of repair.
- D. Inspect the substrate system for moisture content, and determine if areas need to be replaced.
- E. If a sound, stable, well secured surface cannot be ensured, the roof is not acceptable to receive the Coating Restoration System.
- F. Perform an adhesion test of the ONESTEP PLUS to a representative and properly prepared area of the Aged BUR or Modified Bitumen membrane. Consult ERSystems® if a primer is needed. Contact the ITW POLYMERS SEALANTS NORTH AMERICA, INC. Tech Service for details of adhesion test.

3.02 SURFACE PREPARATION & CLEANING

- A. Prepare the roof surface by high pressure washing with water at a pressure of 2,000 p.s.i. to 3,000 p.s.i. to remove dirt, miscellaneous soils, oily films, and the brown chalky residue which develops on the surface of many smooth Modified Bitumen membranes over time.
- B. Repair deteriorated flashing, cracks, and other surface imperfections with H.E.R., polyester fabric, and PERMATHANE® SM7108 or ERSYSTEMS® 2100 MS ADHESIVE SEALANT.
- C. Repair major substrate defects and replace with appropriate materials to provide a sound surface to which the coating may be applied.
- D. Repair and prepare incidental metal on the roof by priming with POLYURETHANE METAL RUST PRIMER.
- E. Take action to ensure proper drainage on the roof exists.

3.03 SEAMS AND LAPS

- A. To help maintain the monolithic integrity of our restoration system we recommend treating all membrane seams and laps.
- B. H.E.R. shall be applied to seams and laps at the rate of 60 mils in a 3"-4" width. Allow to cure overnight prior to coating.

- C. Deeper gaps and voids can also be detailed with 2100 MS ADHESIVE SEALANT. Allow to cure overnight prior to coating.

3.04 DRAINAGE

- A. Areas exhibiting a lack of positive drainage or ponding water will adversely affect performance of any roofing system and will be excluded from warranty. Where positive drainage does not exist, water removal from the roof surface must be facilitated by lowering drains and/or taking other corrective action. Additional maintenance inspections, repair work, the addition or use of primers and/or higher system mil-build may be required in these areas to extend coating life.

3.05 COATING APPLICATIONS: (Total dry mil minimums not acceptable uniformly over entire field)

- A. Repair deteriorated areas: H.E.R. at the rate of 60 wet mils shall be applied to flashings, seams, cracks and substrate areas requiring repair. Under normal curing conditions, repaired areas will require a day to cure prior to re-coating.
- B. Coating Installation – ONESTEP PLUS
ONESTEP PLUS is applied to the properly prepared surface at the rate of 1.5 gallons (5.68 liters) per 100 square feet in 1 pass for smooth asphalt (total dry mil: 22, min 20) and 2.0 gallons (7.57 liters) per 100 square feet in 1 pass for granulated cap (total dry mil: 30, min 28).
ONESTEP PLUS is applied by notched squeegee followed by back rolling. Back rolling will assist in acquiring a uniform membrane thickness.
- C. To finish installation and tie into cured ONESTEP PLUS, you must rub and clean overlapped area with a 10% acetone and water solution.
- D. Please Consult ITW POLYMERS SEALANTS NORTH AMERICA, INC. Technical Department for warranty requirements.

PROTECTION AND CLEAN-UP

PROTECTION

- A. The roof system and all components must be protected from all other trades at the job site.
- B. All damage to the system must be repaired to comply with ITW POLYMERS SEALANTS NORTH AMERICA, INC. guidelines prior to final inspection for warranty approval. The cost of all related repairs will be borne by the trades and/or subcontractors responsible for the damages.

CLEAN-UP

- A. Site clean-up is the responsibility of the contractor.
- B. All debris, containers, materials, equipment, and protection materials must be removed from the premises and properly disposed of. All work and storage areas must be in an undamaged and acceptable condition upon completion of clean-up.