

WHITE REFLECTIVE COATING SYSTEM

Substrate:
EPDM

Mastic Type:
505MS Karna-Flex WB

Primer:
**180 Karna-Sil Epoxy
Primer**

Finish Coat:
670HS Karna-Sil Ultra

The following KARNAK Roof Restoration System is intended to be applied over sound and dry EPDM roofing systems with positive drainage.

BENEFITS & ADVANTAGES:

- System seals flashings and seams to form a seamless elastomeric membrane.
- Silicone coating will not degrade, chalk or crack under harsh UV exposure.
- Tough, flexible elastic film.
- Excellent adhesion to prepared EPDM surfaces.
- 670 Karna-Sil Ultra is an Energy Star® listed reflective coating reduces energy consumption by lowering air conditioning requirements.
- Can provide an energy savings “payback” based on building design, energy consumption needs and insulation levels.
- Application causes no disruption of activities inside building.
- Avoids roof replacement and adds life to the existing roof system.
- Forms a seamless membrane that withstands permanent ponding water without softening.
- NSF Rated – Designed for potable rainwater catchment systems.
- Coating produces a smooth surface that offers excellent resistance to mold, mildew and staining.

PART 1 – MATERIALS

- 1.1 **507 SPC Primer/Wash:** Water-based cleaner designed specifically to safely clean and prepare EPDM roof surfaces for subsequent coatings and mastics.
- 1.2 **505MS Karna-Flex WB:** An acrylic elastomeric sealant formulated for sealing and repairing seams, flashings, curbs, fasteners, penetrations and general repairs to EPDM roofs.
- 1.3 **5540 Resat-Mat:** Spunlaced polyester fabric for reinforcing mastics and coatings when sealing seams and flashings on EPDM roofs.
- 1.4 **180 Karna-Sil Epoxy Primer:** Two-part, water-based epoxy primer used to prime and prepare roof surfaces prior to applying 670 Karna-Sil Ultra silicone coating.
- 1.5 **670HS Karna-Sil Ultra:** Single-component, high solids, moisture curing silicone coating that produces a durable elastic coating with exceptional weathering and water resistant characteristics.

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PART 2 – APPLICATION:

2.1 General:

- A. Read all applicable product data sheets and SDS for appropriate application and preparation guidelines.
- B. All roof surfaces to be coated should be sound, clean, dry and free of dirt, grease, oil, dust, debris and loose granules. Do not apply over brittle roof surfaces.
- C. All seams must be probed and sealed to a water-tight condition using applicable EPDM products prior to the cleaning and application of the liquid-applied roof coating system.
- D. A moisture survey should be conducted. If 20% or more of the roof is considered wet this coating system should not be installed. Other reroofing options should be considered. If wet areas encompass less than 20%, all wet insulation and roofing materials should be removed and replaced with like materials prior to coating application.
- E. Adhesion of the coatings should be tested over all applicable roof surfaces prior to the system application.

2.2 Preparation:

- A. All EPDM roof membrane surfaces must be dry and thoroughly cleaned to remove all dirt, dust, dirt, rust, oxidation or other contaminants.
- B. Cut away low hanging branches and vegetation that extend onto the roof.
- C. Starting at the low end of the roof, apply 507 SPC Primer/Wash to the entire roof surface in a 3-4' foot arc pattern using an agricultural type sprayer. Apply at the rate of 500 sq. ft. per gallon.
- D. Allow the 507 SPC Primer/Wash to stand for approximately 10-15 minutes.
- E. Clean EPDM roof with a commercial power washer (2,000-3,000 psi). When cleaning the EPDM, it should be done slowly and close to the surface in order to remove mica and inorganic release agents.
- F. Rinse thoroughly with power washer. The rinse step may be done at a faster pace than the cleaning step. The final rinse water should be clean with no soap bubbles present. Allow roof to completely dry. Check for thoroughness of cleaning. If carbon black is still present, additional cleaning is needed.
 - a. Note: Due to the rinse water possible containing dirt, mold, mildew, algae and diluted 507 SPC Primer/Wash product, do not allow rinse to flow into drains or sewers

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leading to open bodies of water (lakes, ponds, streams, etc.). Do not dispose of the neat 507 SPD Primer/Wash into drains, sewers, or open bodies of water. Rinse water from downspouts could stain concrete parking lots and decks as it flows to municipal drains. Because of this, temporary hoses should be used to direct the rinse water.

- G. Commencement of work by the contractor implies their approval of the roof surface.

2.3 Repairs:

- A. Seal base flashings, perimeter flashings, roof penetrations, drains, cuts, holes, and splits with 505MS Karna-Flex WB and 5540 Resat-Mat prior to applying coatings.
 - a. Apply Karna-Flex WB in a 1/16" - 1/8" thickness by 8" width directly over the seam or area to repair with a 4" 'chip-type' brush.
 - b. While still wet, immediately embed 6" wide Resat-Mat into the wet Karna-Flex WB. Use the brush to remove any wrinkles or fishmouths.
 - c. Immediately brush apply an additional 1/16" - 1/8" thick by 8" wide application of Karna-Flex WB over the embedded Resat-Mat to completely cover the fabric, feathering the Karna-Flex WB out to the roof surface. No fabric should be visible.
 - d. Total coverage of Karna-Flex WB in this application is approximately 20 lineal feet per gallon.
 - e. Allow Karna-Flex WB to cure 24-48 hours before application of the subsequent coating.
- B. Probe field seams. If tight, seal all field seams by brush applying a 2" wide by 1/16" thick application of Karna-Flex WB with a 'chip-type' brush.
 - a. Total coverage of Karna-Flex WB in this application is approximately 160 lineal feet per gallon.
 - b. Field seams that are open should be secured using EPDM materials then sealed overtop using Karna-Flex WB and Resat-Mat in the same manner as outlined above for "Repairs".

2.4 Primer Application:

- A. 180 Karna-Sil Epoxy Primer 'Part A' and 180 Karna-Sil Epoxy Primer 'Part B' should be both mixed individually first, then combined and mix thoroughly.

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- B. Take combined two component primer and apply at an average rate of 300 sq. ft. per gallon to the entire EPDM roof surface. Do not use material that has been mixed for 4 hours or more.
- C. Apply with a nylon brush or 1/4" to 3/8" nap roller or airless spray equipment.
- D. Allow to thoroughly set, which is normally 2-3 hours (dependent upon temperature and humidity) before applying finish coat. Best adhesion is achieved if coated over within 1-3 days after application. Must be coated over within 7 days after application.

2.5 Finish Coat Application:

- A. Application of 670HS Karna-Sil Ultra should take place when temperatures are 50°F-100°F. Do not apply if rain is expected within 24 hours after application.
- B. Apply 670HS Karna-Sil Ultra over 180 Karna-Sil Epoxy Primer as soon as primer has thoroughly set.
- C. Best adhesion is achieved if primer is coated over within 1-3 days after application. 670HS Karna-Sil Ultra must be applied within 7 days after application of the primer.
- D. Thoroughly mix coating prior to application with a 3" diameter mixer (5-gallon pail) or 6" diameter mixer (55-gallon drum). Once product is mixed, the entire container should be used.
- E. Apply 670HS Karna-Sil Ultra with a soft roof brush, medium nap roller or heavy-duty airless spray equipment.
- F. Apply in a single coat at the rate of 1.5 gallons per 100 sq. ft. (24 wet mils) for most applications. For improved long-term performance, additional coating up to 3.0 gallons per 100 sq. ft may be applied but should be done so in a single coat application.
- G. Do not apply if rain is expected within 24 hours after application.

2.6 Material List & Coverage Rates:

Note: The below listed coverage rates are for estimating purposes only. Actual amounts may vary depending upon the irregularity and porosity of the roof surface, measurements taken and applicator installation.

- A. **507 SPC Primer/Wash:** 1 gallon per 500 sq. ft.
- B. **505MS Karna-Flex WB:** 20 lineal feet per gal.
- C. **5540 Resat-Mat:** 6" x 300' per roll
- D. **180 Karna-Sil Epoxy Primer:** 1 gal. per 300 sq. ft.
- E. **670HS Karna-Sil Ultra:** 1.5 gal. per 100 sq. ft.

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This specification is based upon information and/or pictures provided to us by the applicator/contractor. KARNAK has not inspected the roof or independently verified any of the information provided. KARNAK is relying solely on the applicator/contractor to determine that the roof structure and condition of the roof makes the roof an appropriate candidate for coating, and that a moisture test or other procedure has been performed to verify that the substrate is not wet. The recommended use of KARNAK products listed are predicated on tests believed to be reliable. However, since such application and use is beyond our control, we do not guarantee the results to be obtained. The above specification is offered as a service to the specifier. KARNAK does not practice architecture nor engineering and recommends that you consult a registered architect, engineer and/or roofing consultant. Accordingly KARNAK disclaims all liability in connection with the use of this specification.

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