KARNAK CORPORATION
THE SEAL OF QUALITY

APPLICATION GUIDELINES

WHITE REFLECTIVE COATING SYSTEM

Substrates:
TPO, PVC, Hypalon, EP Single-Ply Membranes

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 TPO, PVC, Hypalon or EP roofing systems with positive drainage. Roof surfaces should be weathered a minimum of four (4) years for best results.

BENEFITS & ADVANTAGES:

- Seals flashings and seams to form a seamless elastomeric membrane with exceptional elongation and tensile strength properties.
- Silicone coating will not degrade, chalk or crack under harsh UV exposure.
- 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 **799 Wash-N-Prep:** Concentrated liquid TSP substitute specifically designed to clean roof surfaces prior to applying coatings.

1.2 **505MS Karna-Flex WB:** An acrylic elastomeric mastic for sealing and repairing seams, flashings, curbs, fasteners, penetrations and general repairs to TPO, PVC, Hypalon and EP roofs.

1.3 **5540 Resat-Mat:** Spunlaced polyester fabric for reinforcing mastics and coatings when sealing seams and flashings on single-ply 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 **670 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 and debris. Do not apply over brittle roof surfaces.
C. It is highly recommended that a moisture survey 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.
D. Adhesion of the coatings should be tested over all applicable roof surfaces prior to the system application.

2.2 **Preparation:**

A. All single-ply roof membrane surfaces must be dry and thoroughly cleaned to remove all dirt, dust, rust, oxidation or other contaminants.
B. Cut away low handing branches and vegetation that extend onto the roof.
C. Power-wash all surfaces to be coated with 799 Wash-N-Prep Roof Cleaner and water maintaining a minimum of 2000 psi. Take all necessary precautions to avoid damage to the roof system when power washing.
    a. Dilute 799 Wash-N-Prep with water at a 16:1 ratio for normal cleaning.
    b. Apply diluted cleaning agent directly to the roof surface with a Hudson-type sprayer or using a stiff nylon brush by dipping the brush into a bucket of diluted cleaner. Cleaner may also be added in full strength to the detergent reservoir for injection dilution at a 16:1 ratio.
    c. Rinse all surfaces thoroughly with a heavy duty power washer using clean water to completely remove all residues. Do not allow dirty solution to pool on the roof and dry.
    d. Allow the roof to completely dry before applying KARNAK coating products.

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2.3 **Repairs:**

A. Seal and repair all seams, base 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 '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.

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.
B. Take combined two component primer and apply at an average rate of 300 sq. ft. per gallon to the entire single-ply 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 40°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.

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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 1.5 gallons per 100 sq. ft. (24 wet mils) for typical application. For improved long-term performance, additional coating 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.	**799 Wash-N-Prep:**	1 quart per 1,600 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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