

## WHITE REFLECTIVE COATING SYSTEM

### Substrates:

Smooth BUR  
Smooth Mod. Bit.  
Granular Mod. Bit.

### Mastic Type:

505MS Karna-Flex WB

### Base Coat:

405 Bond-N-Shield

### Finish Coat:

670HS Karna-Sil Ultra

## APPLICATION GUIDELINES

The following KARNAK Roof Restoration System is intended to be applied over sound, dry, existing smooth built-up asphalt and smooth or granular modified bitumen or granular cap sheet roofing systems with positive drainage.

### BENEFITS & ADVANTAGES:

- Silicone coating will not degrade, chalk or crack under harsh UV exposure.
- Tough, flexible elastic film.
- Excellent adhesion to prepared asphalt surfaces.
- 670HS Karna-Sil is an Energy Star® listed reflective coating that 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 **505 Karna-Flex WB:** An acrylic elastomeric mastic for sealing and repairing flashings, curbs, fasteners, penetrations and general repairs to all types of asphalt roofs prior to applying acrylic coatings.
- 1.3 **5540 Resat-Mat:** Spunlaced polyester fabric for reinforcing mastics and coatings over irregular, rough surfaces as well as smooth surfaces.
- 1.4 **405 Bond-N-Shield:** 100% elastomeric acrylic coating specifically designed as a base coating for improved adhesion to asphalt surfaces. The coating contains stains blockers that prevent asphalt bleed thru to produce a brighter and long lasting coating system. Also greatly improves water blister resistance in temporary ponding areas versus traditional acrylic 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. 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. New cold-applied modified bitumen roofs should weather 90-180 days before installing coating system. New BUR roofs should also age 90-180 days unless special considerations are taken.
- D. Adhesion of the coatings should be tested over all applicable roof surfaces prior to the system application.

### **2.2 Preparation:**

- A. Repair all cracks, splits, holes and large blisters with 505MS Karna-Flex WB and Resat-Mat in a three-course application. Seal all other defective areas that may affect the waterproofing integrity of the existing roof system.
- B. Cut away low hanging 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.

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- d. Allow the roof to completely dry before applying KARNAK coating products.

### **2.3 Repairs:**

- A. Seal and repair all base flashings, roof penetrations, drains, cracks, holes, large blisters 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 area to repair.
  - b. While still wet, immediately embed 6" wide Resat-Mat into the wet Karna-Flex WB.
  - c. Immediately 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 completely dry 6-24 hours before application of the subsequent base coating.

### **2.4 Base Coat Application:**

- A. Application of the base coat should take place when temperatures are 40°F-100°F and humidity levels are 85% or less.
- B. Thoroughly mix the 405 Bond-N-Shield to overcome any settling that may occur. Mix the product to a homogenous consistency.
- C. Starting at one end of the roof, apply one coat of 405 Bond-N-Shield at the rate of 1.5 to 2 gallons per 100 sq. ft. with a 3/4" nap roller or airless spray equipment.
- D. If spray applying the base coat, back roll the coating to achieve maximum adhesion and even coverage.
- E. Apply the coating evenly, working in the same direction. Don't overwork the coating or attempt "touch-ups" while the coating is still wet.
- F. Allow 6-12 hours before applying subsequent coating 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. Best adhesion is achieved if base coat is coated over within 1-3 days after application. 670HS Karna-Sil Ultra should be applied within 7 days after application of the base coat.

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- C. 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.
- D. Apply 670HS Karna-Sil Ultra with a soft roof brush, medium nap roller or heavy-duty airless spray equipment.
- E. Apply in a single coat application at the rate of 1.5 gallons per 100 sq.ft. for 23 dry mils or at the rate of 3 gallons per 100 sq. ft. for 46 dry mils.
- F. 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 gallon   |
| C. 5540 Resat-Mat:        | 6" x 300' per roll  |
| D. 405 Bond-N-Shield:     | 1.5 gal. per 100 sq. ft.  |
| E. 670HS Karna-Sil Ultra: | 1.5 gal. per 100 sq. ft. - 23 dry mils<br>OR<br>3 gal. per 100 sq.ft. - 46 dry mils |

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.

### KARNAK

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