

APPLICATION GUIDELINES

WHITE REFLECTIVE COATING SYSTEM

Substrates:

Smooth BUR
Smooth Mod. Bit.
Granular Mod. Bit.
Granular Cap Sheet

Mastic Type:

Karna-Flex WB

Base Coat:

405 Bond-N-Shield
Reinforced

Finish Coat:

505HS Mohave Coat
White

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:

- 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.
- Substrate specific base coat has excellent adhesion to asphalt surfaces and improved ponding water resistance.
- Reinforced for increased protection.
- Application causes no disruption of activities inside building.
- Protects membrane where granules have worn away.
- Sustainable - Avoids roof replacement and adds life to the existing roof system.
- Reflective coating prevents harmful UV rays from prematurely cracking or drying out the roofing system.

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 **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 **505HS Mohave Coat White:** A high solids, highly reflective, elastomeric roof coating exhibiting outstanding color stability, flexibility, mildew resistance and weatherability.

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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 and 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 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 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 26 lineal feet per gallon.
 - e. Allow Karna-Flex WB to completely dry 6-24 hours before application of the subsequent base coating.

2.4 Reinforced 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 monolithic consistency.
- C. Starting at one end of the roof, apply one coat of 405 Bond-N-Shield at the rate of 2-2.5 gallons per 100 sq.ft. in a width of approximately 44" inches wide and extending out onto the roof about 10' feet. Apply with a ¾" nap roller or airless spray equipment.
- D. Apply the coating evenly, working in the same direction. Don't overwork the coating or attempt "touch-ups" while the coating is still wet.
- E. Immediately embed one ply of 40" wide 5540 Resat-Mat into the wet coating and smooth out fabric with roller or soft roof brush. Make sure there are no wrinkles or holiday in the fabric.
- F. Apply another coat of 405 Bond-N-Shield overtop the fabric reinforcement at the rate of 1.5-2 gallons per 100 sq.ft. to completely saturate and cover the 5540 Resat-Mat.
- G. Continue with the application of 405 Bond-N-Shield and 5540 Resat-Mat. Make sure to fully saturate side laps and end laps of the fabric reinforcement. Side laps should overlap 2" inches and end laps 6" inches. Install fabric reinforcement a minimum of 6" inches above cants and up all penetrations.

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H. Allow base coat to cure 6-12 hours before applying subsequent application coating.

2.5 Finish Coat Application:

- A. Application of the 505HS Mohave Coat should take place when temperatures are 40°F-100°F and humidity levels are 85% or less.
- B. Thoroughly mix the 505HS Mohave Coat to overcome any settling that may occur. Mix the product to a monolithic consistency.
- C. Starting at one end of the roof, apply one coat of 505HS Mohave Coat at the rate of 1.5 gallons per 100 sq.ft. with a ¾" nap roller or airless spray equipment.
- D. Apply 505HS Mohave Coat perpendicular to the preceding base coat.
- E. If spray applying the finish coat, back roll the coating to achieve maximum adhesion and even coverage.
- F. Apply coating evenly, working in the same direction. Don't overwork the coating or attempt "touch-ups" while the coating is still wet.

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. **Karna-Flex WB:** 20 - 26 lineal feet per gallon
- C. **5540 Resat-Mat:** 6" x 300' per roll (Repairs)
40" x 324' per roll (Field)
- D. **405 Bond-N-Shield:** 3.5 - 4.5 gal. per 100 sq.ft.
- E. **505HS Mohave Coat White:** 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 Corporation 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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