



WHITE REFLECTIVE COATING SYSTEM

Substrate:

Existing Concrete Roof
Deck

Mastic Type:

505MS Karna-Flex WB

Base Coat:

407 EPDM & SPF Base
Coat

Finish Coat:

501 Elasto-Brite White

APPLICATION GUIDELINES

The following KARNAK Roof Restoration System is intended to be applied over sound, dry, existing concrete roof decks 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.
- Application causes no disruption of activities inside building.
- Seals and protects concrete roofing systems.
- Sustainable - Avoids roof replacement and adds life to the existing roof system.
- Reflective coating prevents harmful UV rays from prematurely deteriorating roofing systems.

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 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 **407 EPDM & SPF Base Coat:** 100% elastomeric acrylic coating specifically designed as a base coating for improved adhesion to concrete, EPDM and Spray Polyurethane Foam (SPF) surfaces. Provides a high degree of water blister resistance versus traditional acrylic coatings.
- 1.5 **501 Elasto-Brite White:** A highly reflective, elastomeric roof coating exhibiting outstanding color stability, flexibility, mildew resistance and weatherability.

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 smooth, sound, clean, dry and free of dirt, loose coatings, grease, oil, dust and debris. Do not apply over brittle roof surfaces.
- C. Roof deck must have positive drainage.

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- 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 with 505MS Karna-Flex WB and Resat-Mat in a three-course application or other appropriate materials. 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.
 - d. Allow the roof to completely dry before applying KARNAK coating products.

2.3 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 407 EPDM & SPF Base Coat to overcome any settling that may occur. Mix the product to a homogenous consistency.
- C. For porous concrete surfaces, apply a “prime” coat of 407 EPDM & SPF Base coat to the entire roof at the rate of 1 gallon per 100 sq. ft. Apply with a 3/4” nap roller or airless spray equipment. If applying by spray, back roll coating onto the substrate. Allow “prime” coat to dry 6-24 hours before applying subsequent coating.
- D. Once “prime” coat has dried, apply one coat of 407 EPDM & SPF Base Coat at the rate of 1.5 gallon per 100 sq. ft. Apply with a 3/4” nap roller or airless spray equipment. If applying by spray, back roll coating onto the substrate.

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- 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 base coat to cure 6-24 hours before applying subsequent coatings.
- G. Do not apply any coating if rain is expected within 24 hours after application.

2.4 Sealing Penetrations & Flashings:

- A. Seal all base flashings, perimeters, roof penetrations and drain areas with 505MS Karna-Flex WB and 5540 Resat-Mat.
 - 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. Install fabric reinforcement a minimum of 6" inches vertically up above all penetrations and a minimum of 6" out onto the field of roof.
 - f. Allow Karna-Flex WB to completely dry 6-24 hours before application of the subsequent base coating.

2.5 Finish Coat Application:

- A. Application of the 501 Elasto-Brite White should take place when temperatures are 40°F-100°F and humidity levels are 85% or less.
- B. Thoroughly mix the 501 Elasto-Brite White 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 501 Elasto-Brite White at the rate of 1.5 gallons per 100 sq. ft. with a 3/4" nap roller or airless spray equipment.
- D. Apply 501 Elasto-Brite White 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 each coating evenly, working in the same direction. Don't overwork the coating or attempt "touch-ups" while the coating is still wet.

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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.

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|---|------------------------------|
| 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. 407 EPDM & SPF Base Coat: | 1.5-2.5 gal. per 100 sq. ft. |
| E. 501 Elasto-Brite White: | 1.5 gal. per 100 sq. ft. |

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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