

APPLICATION GUIDELINES

WHITE REFLECTIVE COATING SYSTEM

Substrates:

Spray Polyurethane
Foam (SPF) – Previously
Coated

Mastic Type:

502MS Karna-Flex

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 Spray Polyurethane Foam (SPF) roofing systems with positive drainage that have been previously coated.

BENEFITS & ADVANTAGES:

- Silicone coating resist degrading, chalking or cracking under harsh UV exposure.
- Tough, flexible elastic film.
- Excellent adhesion to prepared SPF 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 **799 Wash-N-Prep:** Concentrated liquid TSP substitute specifically designed to clean roof surfaces prior to applying coatings.
- 1.2 **502MS Karna-Flex:** An elastomeric, thermoplastic-rubber sealant formulated for sealing and repairing seams, flashings, curbs, fasteners, penetrations and general repairs to SPF roofs.
- 1.3 **5540 Resat-Mat:** Spunlaced polyester fabric for reinforcing mastics and coatings over irregular, rough surfaces as well as smooth surfaces.
- 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, debris and loose foam.
- 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.
 - a. Remove all wet or punctured foam down to the deck surface.
 - b. Re-foam the entire area using a “froth pack” roof foam kit or applicable foam installation equipment and allow to cure until the foam is solid to the touch. Make sure foam protrude beyond the surface of the roof.
 - c. For smaller repairs and details, use a thin wire and work back and forth to cut the excess foam down to the level of the original roof surface.
- D. All areas where the SPF has degraded must be removed and re-foamed.
- E. 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 where new and existing foam meet with 502MS Karna-Flex 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.

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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 Repairs:

- A. Seal and repair all voids and cracks in the foam as well as seal all base flashings, roof penetrations and drains with 502MS Karna-Flex and 5540 Resat-Mat prior to applying coatings.
 - a. Apply Karna-Flex in a 1/16' - 1/8" thickness by 8" width directly over the area to repair with a 'chip-type' brush.
 - b. While still wet, immediately embed 6" wide Resat-Mat into the wet Karna-Flex. 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 over the embedded Resat-Mat to completely cover the fabric, feathering the Karna-Flex out to the roof surface. No fabric should be visible.
 - d. Total coverage of Karna-Flex in this application is approximately 18-25 lineal feet per gallon.
 - e. Allow Karna-Flex to cure 48-72 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 150 - 200 sq.ft. per gallon to the entire SPF 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.

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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 the SPF roof as soon as repairs have cured.
- 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 670HS Karna-Sil Ultra in a single coat application at the rate 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.

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|---------------------------------------|--|
| A. 799 Wash-N-Prep: | 1 quart per 1,600 sq.ft. |
| B. 502MS Karna-Flex: | 18-25 lineal feet per gallon |
| C. 5540 Resat-Mat: | 6" x 300' per roll |
| D. 180 Karna-Sil Epoxy Primer: | 150 – 200 sq.ft. per gallon |
| E. 607HS Karna-Sil Ultra: | 1.5 gal. per 100 sq.ft. - 23 dry mils
Or
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 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 CORPORATION

330 Central Avenue Clark, NJ 07066 • 800.526.4236 • Fax 732.388.9422

www.karnakcorp.com

Manufacturing: Ft. Lauderdale, FL • Chicago, IL • Kingman, AZ

Warehouses: Dallas, TX • Rancho Cucamonga, CA • Tukwila, WA