

Karnak 505 Elasto-Brite M Metal Roof Coating System

GUIDE SPECIFICATIONS

SECTION: 07545

PART 1—GENERAL

1.0 Scope Of Work:

A. Work Included:

The contractor will provide all labor, materials, equipment, required to prepare and complete the installation of Karnak 505 Elasto Brite-M Liquid Membrane Metal Roofing System. All workmanship shall conform to the manufacturer's material recommendations and accepted industry standards.

1.1 Guide Section Scope:

A.) This section of work is guided by the principals of applicable recommendations of the manufacturer and good industry practices involving workmanship and methodology.

1.2 Applicators:

A.) Karnak recommends that a Pre-Bid Meeting be held to review the project requirements for installing Karnak 505 Elasto Brite-M System. A Karnak representative should be part of the project meeting when possible to provide technical input.

PART 2—PRODUCT DESCRIPTION:

2.0 Product:

Karnak's UL rated "Class A" 505 Elasto Brite-M System consists of an acrylic copolymer formula based on the latest state of the art acrylic technology. The product was developed in Karnak's laboratories and has undergone extensive field testing and client acceptance both in the American market place as well as overseas. The system remains flexible across a wide range of temperatures. The ease of application allows the 505 Elasto Brite-M system to be maintained by in-house facilities personnel as required. The end product is a seamless elastomeric protective film that protects the roof for years against leaks and degradation by the elements. Elasto Brite-M exhibits excellent color retention and U.V. reflection which can result in a substantial savings on energy use.* Karnak 505 Elasto-Brite M is Energy Star® labeled by the EPA.

*Source: Interim report on NRCA sponsored energy savings test conducted at Oakridge National Laboratories.

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PART 3—PRODUCT COMPONENTS:

3.0 Products:

A.) Elasto Brite-M System Components:

Karnak # 505P Rust Inhibitor Primer: Used to enhance the adhesion of Elasto Brite-M to the substrate.

505 Elasto Brite-M Seam Sealant: A high solids elastomeric, single component, acrylic co-polymer that forms a highly elastomeric seal at joints, flashings and fasteners.

#5548 Resat-Mat: A spun-laced fabric made of 100 % polyester, an industry proven material that conforms to the Batten or Standing Seam metal roof configurations found on many metal roofs. #5548 also has the ability to conform to other metal roof configurations as well as transite roofs, Flat Pan, Flat Seam, Crimped Seams, Rolled Seams and roof pan terminations.

505 Elasto Brite-M Base-Coat: A highly elastomeric acrylic emulsion coating specifically designed for application over properly prepared metal roof substrates. Elasto Brite-M exhibits excellent low temperature flexibility, tensile strength and elongation.

505 Elasto Brite-M Finish-Coat: A highly elastomeric acrylic emulsion coating specifically designed for application over properly prepared metal roof substrates. Elasto Brite-M exhibits excellent U.V. reflectance, low temperature flexibility, tensile strength and elongation.

B.) Storage and Handling of Products:

1. All components of the 505 Elasto Brite-M System must arrive at the job site in the original containers, packages, etc., in an unopened condition. All manufacturer labels, logos, and other identifying markings should be intact.
2. Store all materials comprising the 505 Elasto Brite-M System in a dry and heated area as provided for in the product literature.
3. No damaged materials are to be installed on this project and are to be removed from site if discovered to be damaged.

3.1 Product Properties:

A. #505P Rust Inhibitor Primer: An acrylic water-based primer that provides excellent rust inhibiting and adhesive properties. Availability: 5 gal. pails & 55 gallon drums.

B. 505 Elasto Brite-M Seam Sealant - Elastomeric acrylic copoly-

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mer sealant:

Single component, acrylic copolymer elastomeric sealant. Excellent elongation pliability and water resistant properties. Available in 3 gallon buckets.

C. #5548 Resat-Mat (Spun-laced, needle-punched polyester mat)

Outstanding Tear Strength

High Bulk & Porosity

Available in 6" x 270' and 4" x 270' rolls.

D. Elasto Brite-M Base & Finish Coat:

Fire rating:	UL Class A fire rating.
Weight per Gallon: 11 lbs.	ASTM D-1475
Solids by Weight: 59 %	ASTM D-3716
Solids by Volume: 50 %	ASTM D-3716
Color Base Coat:	Gray
Color Finish Coat:	White, Gray, Tan, Terra-Cotta Red, Patina Green (Other colors available upon request, 50 gal. min. order)
Hardness Shore:	A:70 ASTM C-836
Elongation:	300% ASTM C-836
Tensile Strength:	350 PSI ASTM C-836
Weathering:	Excellent QUV Weatherometer & field tests
Permeability:	0.3 Perms
Availability:	5 gallon pails & 55 gallon drums.

Coverage Rates: Apply at the rate of 1.5 gallons per 100 sq.ft. Coverage will vary with the porosity of the surface. Two applications should produce an 20-24 dry mil thickness.

Note: COLD-PROCESS SYSTEMS AND COATINGS, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION) "THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING."

Caution: Do not apply when rain is imminent. **Do not thin.** Keep from freezing. Store in a dry place (heated). Keep container covered when not in use. Avoid breathing fumes. If taken internally do not induce vomiting. Call a physician at once.



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See MSDS for further information. Dispose of in an environmentally safe manner.

PART 4—505 ELASTO BRITE-M USES

4.0 Metal Roofing: Old and New Applications

A.) 505 Elasto Brite-M may be used on new or weathered metal roofs. The metal deck should be free of rust, scale, dust, oil and grease, prior to the application of Karnak #505P Primer. All rust or scale must be removed. This may be accomplished by wire-brushing, power washing or sand blasting. All removal of rust, scale, and other substances such as grease, oils, dirt, etc. shall be followed by power washing the entire surface. Power-wash shall consist of a minimum of 2,000 psi water pressure in order to remove all contaminants from the roof surfaces. The metal roofing should be allowed to dry completely before any primer is applied as required.

PART 5—KARNAK CORPORATION FREE ROOF AUDIT:

5.1 - Karnak Pre-Application Roof Audit:

A.) The metal deck must be structurally sound before application of the 505 Elasto Brite-M System. Any rotted, cracked, loose, deflecting, sections must be repaired prior to the application of the 505 Elasto Brite-M Metal Roofing System. Do not proceed until all structural defects, if any, are corrected. A Karnak representative can assist in a walk through examination of the roof(s) with a free of charge evaluation (two-weeks advance notice required). Karnak Corporation does not practice architecture or engineering and recommends that you consult a registered architect, engineer and/or roofing consultant.

PART 6—ROOF CONDITIONING:

6.0 Fasteners:

A.) Mechanical Fasteners: All mechanical fasteners should be evaluated for looseness, corrosion, & absence. Karnak recommends that all fasteners be tightened and all defective or missing fasteners be replaced with industry approved fasteners and a neoprene washer insert. All fasteners will then receive an application of Elasto Brite-M Seam Sealant in the form of a dab or dollop. All seams of the roofing system, flashings, pitch pockets, and other areas of expected or known movement should also receive an application of 505 Elasto Brite-M Seam Sealant.

B.) Loose Metal Roof Panels: Any loose metal panels including edges should be

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secured with the appropriate metal fasteners.

- C.) Primer: Prior to applying the Karnak #505P Inhibitive Primer, all fungus, grease, oil, rust, and other contaminants should be either mechanically removed by wire-brushing, or removed by means of power-washing. A minimum working pressure of 2,000 PSI is required to remove all contaminants from the roof substrate. Allow the roof to dry completely before beginning any primer applications. An alternate method of removing the rust may be sand blasting, although caution must be taken not to puncture or damage the integrity of the panels.
- D.) Sealed Joints: Any joints in the metal roof system over 1/8 " wide should be covered with a coating of 505 Elasto Brite-M Seam Sealant and reinforced with Resat-Mat polyester fabric. A second coat of 505 Elasto Brite-M Seam-Sealant applied immediately over the mat will protect the application and provide a well secured and prepared joint.
- E.) Roof Openings, Vents, Heat Stacks, Skylights, Curbs

Flashing Details:

All roof penetrations and points of movement must be "framed" with Karnak 505 Elasto Brite-M Seam Sealant, prior to the application of 505 Elasto Brite-M Base and Finish coats. Any penetrations in the metal roof system should be covered with a coating of 505 Elasto Brite-M Seam Sealant and reinforced with 5548 Resat-Mat polyester fabric. A second coating of 505 Elasto Brite-M Seam Sealant over the mat will protect the application and provide a well secured and prepared penetration detail. Note: Any/all seams including ridge caps must be made flush with the roof surface plane using self tapping screws. Use an inert backer rod to pre-fill any void in the metal over 1/2", prior to applying 505 Elasto Brite-M Seam Sealant. All seams and ridge caps should dry for a period of not less than 24 hours before an application of 505 Elasto Brite-M is made.

Note: Some shrinkage may occur after application. The contractor should inspect for the following:

1. All seams should be properly sealed with no voids.
2. No wrinkles or fish mouths should be present.
3. No Resat-Mat should be exposed.

All irregularities may be repaired by spreading additional 505 Elasto Brite-M Seam Sealer on the areas and smoothing out the fabric where necessary.

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PART 7—APPLICATION OF 505 ELASTO BRITE-M ACRYLIC BASE COAT:

- A.) The 505 Elasto Brite-M Base Coat should be applied to a deck that has been primed with Karnak #505P Primer and all the joints, fasteners, and penetrations have been flashed with 505 Elasto Brite-M Seam Sealant and Karnak 5548 Resat-Mat.
- B.) Dry Surfaces: All surfaces must be dry at the time of application. The ambient temperature at the time of application must be 40°F and rising and must remain above this temperature for a period of 48 hours after the application of the coatings.
- C.) Mixing: Mix 505 Elasto Brite-M Base Coat thoroughly using a mechanical mixer (low speed). Elasto Brite-M may be applied using either a brush, roller or spray equipment.

*SPRAY EQUIPMENT:

Recommended Tip Sizes:	.035 - .043" (Elasto Brite-M Base Coat) .019 - .021" (Karnak #505P Rust Inhibitor Primer) Reversible tips are recommended to prevent clogging.
Recommended Hose Length:	300' Maximum
Recommended Hose Diameters:	1/2" x 100, 3/8" x 200' 3/8" x 50'
Recommended Power Source:	Gas engine, 16 hp. min. pump.
Recommended Gun:	Heavy Materials Pole Gun w/36' extension to minimize overspray.

*Source: Graco Spray Equipment, Inc.
Graco Technical Assistance phone: 1-800-542-0339

PART 8—APPLICATION OF 505 ELASTO BRITE-M ACRYLIC FINISH COAT:

- A.) The 505 Elasto Brite-M Finish Coat should be applied to a deck that has been coated with 505 Elasto Brite-M Base Coat. The application should be performed perpendicular to the base coat application.



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B.) Dry Surfaces: All surfaces must be dry at the time of application. The ambient temperature at the time of application must be 40°F and rising and must remain above this temperature for a period of 48 hours after the application of the coatings.

C.) Mixing: Mix 505 Elasto Brite-M Finish Coat thoroughly using a mechanical mixer (low speed). 505 Elasto Brite-M may be applied using either a brush, roller or spray equipment.

***SPRAY EQUIPMENT:**

Recommended Tip Sizes:	.035 - .043" (Elasto Brite-M Finish Coat) .019 - .021" (Karnak #505P Rust Inhibitor Primer) Reversible tips are recommended to prevent clogging.
Recommended Hose Length:	300' Maximum
Recommended Hose Diameters:	1/2" x 100, 3/8" x 200', 3/8" x 50'
Recommended Power Source:	Gas engine, 16 hp. min. pump.
Recommended Gun:	Heavy Materials Pole Gun w/36' extension to minimize overspray.

*Source: Graco Spray Equipment, Inc.

Graco Technical Assistance phone: 1-800-542-0339

Note: If spray equipment is used, only trained individuals should operate the spray equipment. Care must be taken to insure that nozzles do not get clogged. Consult with Karnak's Technical Department and the manufacturer of the spray equipment prior to spraying this system. When using spray equipment, it is advised that care be taken to protect objects and buildings, cars, etc. from spraying damages. The recommended mils for the application should be 20 - 25 wet mils at each coat. It is recommended that a trial pass be made to familiarize the operator with the equipment if this is the first attempt at using the equipment.

8.3 Coverage Rates: Coverage rates will vary depending on the porosity of the material being coated and the equipment used to apply it. Large projects are better served by using spray equipment. The size and quality of the work crews will also factor into the application. If spray equipment is used, it is advisable to have an individual hold and guide the hose while the spray person performs his/her spray application. If the applicator is not familiar with the application of the system, it is our recommendation that a 100 square feet area be measured to verify the coverage rate. **Note: Since most metal roofs have different surface configurations, the profile of the panels must be considered when calcu-**



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lating the surface area. There could be as much as a 20% difference in square footage as compared to a flat conventional roof.

PART 9—FIVE YEAR KARNAK LIMITED MATERIAL WARRANTY:

9.0 The Karnak Corporation will, at the completion of a project using the herein described Karnak Products, application recommendations and industry standards, etc., issue a limited warranty for materials only. Contact your local Karnak representative or call the Karnak Company Technical Department at 1-800-526-4236 for further information. Individual product brochures are available for your reference.

Note: The above specifications are offered as a service to the specifier, Karnak Corporation does not practice architecture or engineering and recommends that you consult a registered architect, engineer and/or roofing consultant.

The above suggested recommendations for use of Karnak products are predicated on tests believed to be reliable. However, since such application and use is beyond Karnak's control, we do not guarantee the results to be obtained.

If further information is needed, contact Karnak Technical Services at 1-800-526-4236.

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