



SAFE-T-GRIP®

General Application Specification

DESCRIPTION

This work shall consist of installing a textured friction surface in areas as designated on the plans and details, in accordance with the plans and specifications.

MATERIALS

Use Safe-T-Grip® as manufactured by Epoplex, 1000 East Park Avenue, Maple Shade, New Jersey 08052, a two part modified exothermic epoxy resin binder treatment, containing an epoxy/amine binder covered with natural or pigmented aggregate or an engineer approved equal.

The binder shall consist of a thermosetting modified epoxy/amine compound which holds the aggregate firmly in position. The binder shall meet the following requirements:

PROPERTY	REQUIREMENT	TEST METHOD
Percent Solids	100%	
Viscosity - Epoxy Hybrid Resin	600 - 1000 cP	
Viscosity - Amine Resin	1500 - 2500 cP	(ASTM D-2196)
Gel Time @ 77°F/25°C	10 minutes min	(ASTM D-2471)
Cure Time @ 77F/25C	2 hours	
Adhesion	> 300 psi (100% concrete failure)	(ASTM D-7234)
Hardness, Shore D	70 min	(ASTM D-2240)
Tensile Strength	2800 psi min	(ASTM D-638)
Elongation	40% min	(ASTM D-638)
Compressive Strength	@ 3 hours > 1,000 psi @ 24 hours > 5,000 psi	
Water Absorption	0.25% max @ 24 hour	(ASTM D-570)
Skid Number	> 80	(ASTM E-274)
Coverage:		
Liquid Binder	0.36 gallons/sq yd, (25 sq ft/gallon), minimum	
Aggregate	22-24 lb/sq yd	

Note: All properties are tested at 7 days unless otherwise noted.

The aggregate specified shall be as per the project specific requirements. The aggregate will be delivered to the construction site in clearly labeled 50 pound bags or 2000 pound super sacks, and it should be clean, dry, and free from foreign matter. Ninety percent of the aggregate should be 4-12 mesh. The aggregate should be crushed granite or calcined bauxite, and it can be color coated to match custom colors.

CONSTRUCTION REQUIREMENTS

The two part modified epoxy binder material shall not be applied on a wet surface, or when the ambient and/or surface temperature is below 40°F or above 105°F, or when the anticipated weather conditions would prevent the proper application of the surface treatment as determined by the manufacturer.

Existing surfaces shall be cleaned by use of mechanical sweepers, high pressure air, or other methods approved by the Engineer prior to the installation. Receiving surfaces must be clean, dry and free of all dust, oil, debris and any other material that

might interfere with the bond between the epoxy binder material and existing surfaces. Surfaces may need to be washed with a mild detergent, rinsed and dried using a hot compressed air lance. Remove any existing pavement markings as deemed necessary by the manufacturer. Adequate cleaning of all surfaces will be determined by the Engineer and/or manufacturer's representative. Cover and protect all existing pavement markings and utilities prior to placement. Clean and fill all inadequately sealed joints and cracks greater than ¼" with a manufacturer's approved crack sealant.

A manufacturer's representative can be on site to provide technical assistance during the start up operations and as necessary during the surface preparation, material installation and during any necessary remedial work. Place the surface treatment in accordance with manufacturer's recommended methods at the thicknesses and details as shown in the contract documents.

APPLICATION OF THE TWO PART MODIFIED EPOXY BINDER COMPONENTS

The two part modified epoxy binder utilized in the high friction surface application shall be hand applied, or by a self-contained plural component pumping system. The binder is mixed at a 2:1 ratio by volume.

If using a self-contained plural component pumping system, the system must be capable of continually mixing and delivering the components on demand via multiple spray guns. The unit needs to be capable of heating the components to the proper application temperature. Mechanically applied distributing equipment shall include accurate measuring devices and/or calibrated containers and thermometers for measuring the binder temperature and pressure prior to placement. The capacity of the system will be at a minimum of 500 gallons with a minimum spraying capability of 4 gallons per minute.

For application by hand, larger areas should be applied utilizing a 15 mil notch squeegee to ensure uniform thickness and correct rate of coverage. The material should be squeegeed out and back rolled, using a medium nap roller. Smaller areas may be applied by means of a medium nap roller only, but it is imperative to ensure proper thickness is achieved.

The two part modified epoxy binder shall be uniformly distributed over the pavement section that is to be treated. The material shall be applied within the temperature range specified. Operations shall proceed in such a manner that will not allow the epoxy material to chill, set up, dry or otherwise impair retention of the covered aggregate.

The mixed components must be applied onto the cleaned surface at a minimum coverage rate of 0.36 gallons/square yard (25 sq.ft./gal). Immediately apply the aggregate onto the installed two part modified epoxy binder, at a rate of approximately 22-24 lbs. per square yard coverage (coverage is highly dependent on surface porosity. Contact the project engineer and/or the material manufacturer for specific project coverage).

Two part epoxy materials not meeting the mixing ratio and specific gravity requirements will not be allowed. A notarized certificate of compliance shall be supplied upon request from the two part modified epoxy resin manufacturer.

Utilities, drainage structures, curbs and any other structure within/adjacent to the treatment location shall be protected against the application of the surface treatment materials.

Allow the treatment to cure in accordance with manufacturer recommendations, approximately 2 hours at an ambient temperature of 75°F and rising. Remove the excess aggregate by mechanical means or suction sweeping truck before opening to traffic. Excess aggregate can be reused on the following day's installation. The aggregate must be clean, uncontaminated and dry.

IMPORTANT:

Epoplex believes the information contained here to be true and accurate. Information contained here is for evaluation only. Epoplex makes no warranty, expressed or implied, based on this literature. We further reserve the right to modify and change products or literature at any time.

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