

## PRODUCT DATA SHEET HFS - HIGH FRICTION SURFACE

420 N. Roosevelt Ave. • Chandler AZ 85226 1-800-528-8242 • (602) 276-0406 • FAX (480) 961-0513 www.crafco.com

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## READ BEFORE USING THIS PRODUCT

**GENERAL** HFS is a machine or hand applied, high friction, multi-purpose surface treatment suitable for application on asphalt or concrete pavements. The system comprises a specially formulated cold modified two-part epoxy resin based binder, 100% non-volatile in content, which is top surfaced with natural colored or pigmented aggregate, such as bauxite or granite. The installed system will provide a durable, high friction skid resistance treatment for traffic calming on dry or wet pavement. HFS is particularly suited for intersections, sharp curves and corners, bridges and parking structures, pedestrian crosswalks and sidewalks, bike and bus lanes, traffic calming, exit and entrance ramps, approaches to toll booths, school zones and hospital entrances, identification of potentially hazardous conditions, industrial plants and many other applications.

**HFS TWO-PART BINDER**HFS binder is a 100% solids, self-leveling, primerless, low odor, epoxy coating designed to increase friction and or appearance of road pavements and other surfaces by encapsulation of high friction aggregates. The binder provides a convenient work life, rapid tack free time and adhesion to road pavement materials. The binder can easily be applied with a squeegee with a normal application thickness of 50 mil (1.27mm). Application thickness varies depending on the porosity and roughness of the surface, and size of the aggregate used. A single build may be applied to horizontal surfaces up to 1/8" thick (125 mil or 0.3cm).

## HFS binder meets the following specification requirements:

<b>Property</b>	Specified Specified	<u>Typical</u>	Test Method
Pot Life	15-45 min @ 75°F	19 min.	ASTM C881 (50 ml sample
			in paper cup)
Tensile Strength	2000-5000 psi @ 7 days	2230psi	ASTM D638
Tensile Elongation	30-70% @ 7 days	39.6%	ASTM D638
Viscosity	7-25 poises	24.8 poise	ASTM D2393 (Model RVF
			Brookfield, Spindle No 3 @ 20 rpm)
Min compressive strength @ 3 hrs	1000 psi @ 75°F	>1200psi	ASTM C109 (use plastic inserts)
Min compressive strength @ 24 hrs	5000 psi @ 75°F	>6600psi	ASTM C109
Min adhesion strength @ 24 hrs	250 psi @ 75°F	500 psi	VTM-92

**COVER MATERIAL** A Crafco supplied cover material must be used in order for the HFS to be warranted. Product data sheets are available for the several options of bauxite, granite and quartz that can be provided by Crafco. The table below can be used as a guide when selecting sizes for different application areas:

Size	Grade
-0.187 + 0.0469 in.	Course
-0.125 + 0.0625 in.	Medium
-0.0197 + 0.0098 in.	Fine

High levels of moisture can cause serious adhesion problems between the aggregate and binder. Under some circumstance this can lead to premature failure of the HFS. The maximum moisture content that the stone should contain for HFS application is.5%. The dust content of the stone is an important consideration as it will affect the long term adhesion of the aggregate to the resin being used. If there is excess dust in the stone then this will often lead to a poor bond between the aggregate and binder.

**APPLICATION PROCEDURE** Prior to use, the user must read and follow application instructions for HFS to verify proper product selection, surface preparation procedures, installation methods, usage precautions and safety procedures.

**PACKAGING** 1 gallon pre-measured kit, 5 gallon pre-measured kit, bulk 5 gallon pails, bulk 55 gallon drums

## **STORAGE**

Binders – The pails of Part A & Part B should be stored in a covered location away from the sun, frost and dampness. Storage temperature should be between 50°F and 100°F. The storage life in these conditions will be approximately 12 months in sealed containers.

Aggregate – Sacks/bags of aggregate must be stored in a dry place. No storage limit, but must be kept dry at all times. Wet, damp aggregate is unacceptable and should be thoroughly dried prior to use for the application of the high friction surface treatment system.

WARRANTY CRAFCO, Inc. warrants that CRAFCO products meet applicable ASTM, AASHTO, Federal or State specifications at time of shipment. Techniques used for the preparation and installation are beyond our control as are the use and application of the products; therefore, Crafco shall not be responsible for improperly applied or misused products. Remedies against Crafco, Inc., as agreed to by Crafco, are limited to replacing nonconforming product or refund (full or partial) of purchase price from Crafco, Inc. All claims for breach of this warranty must be made within three (3) months of the date of use or twelve (12) months from the date of delivery by Crafco, Inc. whichever is earlier. There shall be no other warranties expressed or implied. For optimum performance, follow Crafco recommendations for product installation.