



Surface Treatments

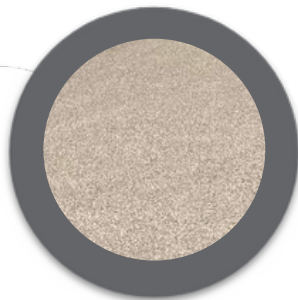
High Friction Surface Treatment

Save Lives through a High Performance,
Cost Effective Safety Solution

By decreasing braking distances and improving control of vehicles, High Friction Surface Treatment has been proven to **save lives** and **reduce accidents**. The solution significantly **increases skid resistance** in both wet and dry conditions.



Exceptional
Durability



Enhanced Skid
Resistance



Fast
Installation



www.wjsurfacetreatments.com



High Friction Surfacing Treatment

High Friction Surfacing Treatment (HFST) is a solution that provides enhanced levels of skid resistance at safety critical locations. It is a friction enhancement surfacing consisting of a two component Epoxy Binder, 100% solids, moisture tolerant, high strength, low modulus, multi-purpose epoxy adhesive, meeting ASTM C881 and AASHTO M235, Type III, Classes B & C specifications. 'HFST has been found to reduce wet weather accidents by 57% and could reduce the overall number of accidents on our roads by 5.5%'.

Why HFST?

- Suitable for all asphalt and Portland cement concrete pavements
- Exceptional durability with a long service life
- Fast installation, which can be laid onto suitable existing surfaces
- Low odour and toxicity binder system

Features

- High strength, low modulus epoxy binder
- Rapid cure return to traffic formula
- Independent testing lab certification
- Convenient 1:1 mix ratio by volume
- Mends cracks on HFST or bridge deck overlay applications
- Protects concrete from water and de-icing salts
- Chemically resistant to fuel and antifreeze
- Made in the USA

Typical Uses

HFST is ideal for all roads where high levels of skid resistance are required to increase safety. Asphalt or concrete with slick surfaces are particularly suitable for HFST to be installed, and it is best suited in specific locations such as:

- Sharp curves, intersection, and freeway slip roads
- Pedestrian walking approaches
- Accident black spots
- Highly trafficked, high stress areas



Physical Properties

HFST uses 100% calcined bauxite aggregate, and any deviation from this will compromise performance.

Mix Ratio: 1:1 by volume **Viscosity:** 1,500 cP

Shore D Hardness: 70 **Tack Free Time:** (75°F/24°C): <3 hours

Tensile Strength (ASTM D638): 2,800 psi (19.3 MPa) **Tensile Elongation (ASTM D638):** 40%

Bond Strength (ASTM C882): 2 day cure 2,000 psi (13.8 MPa) 14-day cure 2,800 psi (19.3 MPa)

Compressive Strength (ASTM C579): 3-hour cure 1,500 psi (10.3 MPa) 24-hour cure 5,000 psi (34.5 MPa)

Bond Strength (ASTM C1583/ACI 503R): 300 psi (2.0 MPa)

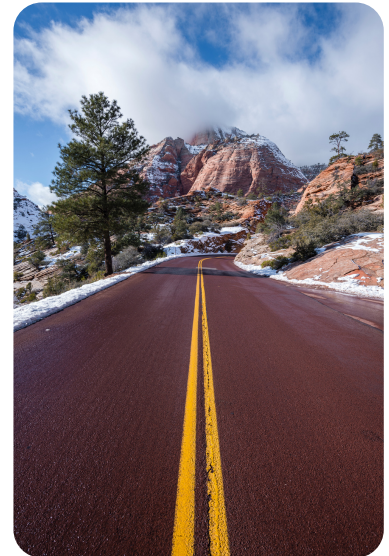
Shrinkage (ASTM D2566): 0.2%

Thermal Compatibility (ASTM C884): Pass

Heat Deflection Temperature (ASTM D648): 120°F (49°C)

Absorption (ASTM D570): 0.2% (24 hr)

Chloride Ion Permeability (AASHTO T277): 0.0 Coulombs



Health & Safety

For further information, consult the relevant safety data sheet.



Color

The overall color of the surface will be determined by the natural color of calcined bauxite.

However, if required, the surface can be pigmented, but it is important to note that with heavy wear over time, the natural color of the calcined bauxite will begin to show through.



Application

General Guidance Recommendation:

- Surfaces must be clean and sound. Surface should be visibly dry. No standing water. Concrete moisture levels must be less than 5% when measured using a multi-pin moisture meter.
- Remove dust, laitance, grease, curing compounds, impregnations and other contaminants. Concrete surfaces should be shot blasted to a CSP 3-5 per ICRI.
- Condition material to 65° - 85° Fahrenheit (18° - 29° Celsius) for optimum application. Minimum age of concrete 21-28 days, depending on mix design. Minimum age of asphalt is 30 days and 75% aggregate exposure.
- Consult material technical services for applications outside these parameters.
- Utilize the following method to apply the resin binder under manufacturers recommendations:
 - Manual applications are allowable for locations of less than 500 square yards.
 - Automated Continuous Application
 - Automated continuous application must be performed by an applicator vehicle with a minimum of 1100 gallons of the polymer resin binder. The applicator vehicle must continuously mix, heat, meter monitor, and apply the polymer resin binder in a continuous pass as one layer.

General Application / High-Friction Surface Treatment:

- Fully automated application process.
- The bauxite high friction aggregate and polymer resin binder shall be dispensed equally across the entire application surface in a manner that covers the surface area to be treated at the mil thickness of $65 \pm$ mils without any breaks, swirls, ridge lines or differential thickness of the polymer resin binder over the area being treated, the bauxite high friction aggregate shall simultaneously cover the polymer resin binder at a rate of 15 ± 2 lbs per square yard within 15 ± 5 seconds of the polymer resin binder application.

