

HDF-250

Heavy-Duty Epoxy Flooring System

Description

Advanced FRP Systems' **HDF-250** is a 100% solids, Bisphenol A-based epoxy floor coating system. It has been engineered to provide outstanding adhesion to concrete, metal or other substrates for use as a heavy-duty, industrial flooring product. **HDF-250** combines excellent chemical resistance, abrasion resistance, and impact resistance in an easy-to-use, surface-tolerant formulation. This vehicular-grade flooring product is designed to make slick areas safer for both foot and rolling equipment traffic.

Product Advantages

- Zero VOC Coating system
- Outstanding adhesion to concrete, steel, masonry, wood and composites
- Highly blush-resistant formulation
- Easy to apply, low viscosity epoxy
- Ships DOT Non-Corrosive
- Surface Tolerant epoxy
- Cures at temperatures as low as 30 °F

Suggested Application

Designed for heavy industrial areas that require a chemically-resistant, non-slip finish. Suitable for cement, metal, fiberglass or wood substrates. Excellent choice for flooring around tanks or fill stations that contain aggressive chemicals, heavy industrial warehouse scales, off-shore equipment/walkways.

Performance Data

	Test Method	Results
Abrasion Resistance	ASTM D4060; CS17 wheel, 1 Kg	15 - 40 mg loss/1000 cycles
Adhesion to Steel	ASTM D4541	>3000 psi
Heat Distortion Temperature	ASTM D648	135 °F
Direct Impact Resistance	ASTM D2794	77 in lbs
Immersion Resistance	Fresh and Salt water; 1 year	No rust, no blistering, no loss of adhesion
Humidity Resistance	ASTM D4585; 10,000 hours	No rust, no blistering, no cracking, no loss of adhesion
Dry Heat Resistance	ASTM D2485	250 °F (121 °C)

Product Characteristics

Finish: High Gloss

Color: Grey (other colors available)

Volume Solids: 100%

Mix Ratio (by wt.): 6.4:1

Mix Ratio (by vol.): 3.1:1

Density: 1.88 g/mL

Approx. Coverage: 53.5 sqft/gallon at 30 mils

Maximum Film Build: 40 mils per coat

Working Time: 40 minutes at 75 °F

Application Temperatures: 45 - 105 °F

HDF-250 is sold in 1, 2, and 4 gallon units. Other unit sizes may be available.

Sold FOB Weymouth, MA

Cure Schedule

Cures for Application	50 °F (10 °C)	75 °F (24 °C)	100 °F (38 °C)
Dry to Touch	14 hours	8 hours	4 hours
Dry Hard	36 hours	24 hours	12 hours
Overcoat Window	14 - 168 hours	8 - 120 hours	4 - 72 hours
Cures for Service	50 °F (10 °C)	75 °F (24 °C)	100 °F (38 °C)
Light Traffic	36 hours	24 hours	12 hours
Heavy Traffic	48 hours	36 hours	24 hours
Full Chemical Resistance	168 hours	120 hours	72 hours

Contact Advanced FRP Systems for elevated temperature post-cure information. Elevated temperature cures will increase chemical resistance and reduce return to service time.

Application Information

All Advanced FRP Systems products should be installed by a certified applicator or with direct oversight by Advanced FRP Systems, Inc. This data sheet provides general application guidelines for HDF-250.

Contact Advanced FRP Systems for more information if your project has detailed coating specifications.

Ensure air and substrate temperatures are between 45-105 °F and relative humidity is below 95%. Follow surface preparation guidelines below prior to coating.

Pour all of Part A – Hardener into Part B – Base and mix with low speed power agitator for 2-3 minutes. Using a paint stick or spatula, thoroughly scrape sides and bottom of unit. Mix with power mixer for an additional 2 minutes. Do not dilute Advanced FRP products.

HDF-250 should be applied via squeegee and back-roll techniques. After mixing, the product should be poured out into a pre-measure area of floor and spread around to a relatively uniform layer with a squeegee. The entire area should then be back-rolled to provide a uniform thickness. Transitions should be rolled with 2 hours of mixing the initial material or a seam will be visible.

Badly damaged and pitted areas should be repaired with a suitable putty material like **EM-110** or **FRP Repair Putty** to provide a relatively smooth finish prior to application. **FRP Sealer 200** is recommended for applications over concrete to increase the adhesion and minimize out-gassing of the substrate.

HDF-250 should be applied in a single layer between 20 – 40 mils in thickness. The thinner the material is laid out, the more aggressive the non-slip finish will be. A minimum of 20 mils is required to bind the aggregate in place. A maximum of 40 mils otherwise the aggregate will not raise above the surface of the film.

Coating system must cure to a hard, and tack-free state prior to return to service. See above table for guidelines on return to service times.

Surface Preparation

Steel (Atmospheric Corrosion): Remove all oil and grease from surface with an SSPC-SP 1 Solvent Wipe. Recommended surface preparation is SSPC-SP 6 Commercial Blast Cleaning with an angular surface profile of 2 - 4 mils.

Concrete (Immersion/Secondary Containment): Refer to SSPC-SP 13/NACE No. 6, Section 4.3.1 or ICRI No. 310.2, CSP 1-3 for concrete preparation guidelines. Surface should be thoroughly cleaned and dry. Concrete and mortar must be cured at least 28 days @ 75 °F. Surface must be free of laitance, concrete dust, dirt, form release, curing aids and other foreign material. **Advanced FRP Sealer 200** should be applied prior to coating at 3-5 mils to increase adhesion and reduce out-gassing.

Concrete (Atmospheric Corrosion): Refer to SSPC-SP 13/NACE No. 6, Section 4.3.1 or ICRI No. 310.2, CSP 1-3 for concrete preparation guidelines. **Advanced FRP Sealer 200** is not required but recommended for improved adhesion and aesthetics.

Previously Coated Surfaces: Consult with Advanced FRP to ensure previous coating is compatible. If compatible and previous coating is in good condition, remove all loose coating and foreign materials. Brush blast or grind all glossy areas to a uniform dull finish. Remove dust, oil and debris with SSPC-SP 1 Solvent Wipe prior to coating.

Storage and Shelf Life

HDF-250 must be stored between 45 – 110 °F, out of direct sunlight. If stored in these conditions, the product will have a 24-month shelf life.

Safety Precautions

Please consult up-to-date Safety Data Sheets (SDS's) prior to use. An SDS should be available on site whenever Advanced FRP products are being used.

Warranty Information

Advanced FRP Systems, Inc. warrants that our products are free of manufacturing defects in accordance with applicable Advanced FRP quality control parameters. Liability for products proven defective, if any, is limited to replacement of defective product or refund of purchase price as determined by Advanced FRP Systems. Additional warranties and protection are available. Contact Advanced FRP for more information.

Disclaimer

The information and recommendations set forth upon this data sheet are based on years of laboratory and field analysis. This information is intended to be used as guidance only as many factors affect the performance of polymeric systems. Actual exposure conditions are the best test of suitability and Advanced FRP Systems will generally provide complimentary samples for field testing.

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