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BIO-DUR 3000

REINFORCED, PROTECTIVE COATING for HIGH TEMPERATURE SERVICE

PRODUCT DESCRIPTION

Originally created for Safety Related applications in the nuclear industry, designed to exceed Severe DBA testing. **BIO-DUR 3000** is field friendly to use, can be applied on wet or dry surfaces, immersed service up to 350°F, and solvent free for low TOC emissions. Bio-Dur 3000 has been used extensively in port facilities where concrete and steel surfaces are constantly subjected to UV and salt exposure. **BIO-DUR 3000** has also been used with FRP repairs on concrete structures and pipelines.

RECOMMENDED USES

ANTICORROSIVE COATING: Splash zone, excellent abrasion resistance above or below water.

ENCAPSULATING COATING: Smooth, dense, easily decontaminated coating for steel and concrete

HIGH HEAT, ANTI-ABRASION COATING: High Tg coating with hard, abrasion-resistant pigmentation.

REPAIR COMPOUND: Patching, leak sealing, etc. above and below water.

WASTEWATER: Reinforces, smooths, and protects concrete exposed to chemical or municipal waste.

PRODUCT INFORMATION

COMPOSITION:	Vehicle Type	Epoxy/Aliphatic Polyamines
	Pigmentation	Colored/Inert/Kevlar Fiber reinforced
	Mixed Density	1.36 g/ml3
	Colors	Standard colors - Black, White, Grey, Etc.
	Finish/Gloss	High gloss
	Flash point	>200°F
	Solids by volume	100%, VOC free
	Thinner	Not needed.
APPLICATION:	Mixing Ratio by volume	2:1
	Pot life	40 minutes at 77°F
	Induction Time	Not needed
	Application Method	Brush, Roller, Pad, Heated plural airless spray
	Recommended Wet/Dry Application Thickness:	Wet: 30 mils per coat Dry: 30 mil thickness
	Spreading Rate / gal	50 sq.ft./gallon @ 30 mils
	Dry Time, dust free	6 hours @ 77°F (25°C)
	Dry Time, Service	14 hours @ 77°F (25°C)
	Maximum Overcoat Window	72 hours at 77°F (25°C)
	Application Temperature	45°-110°F
	Cleaner	MEK or Lacquer thinner
SHELF LIFE:	Shelf Life	24 months
	Storage Conditions	Sealed, stored in protected environment avoiding direct sunlight exposure.
TRANSPORTATION:	USDOT, IATA, IMO	Not regulated when shipped in 2 gallon or smaller kits

TESTING RESULTS

PROPERTY	TEST METHOD	RESULTS
Abrasion Resistance	ASTM D4060	28.0
Hardness	Shore D	85+
Glass Transition	ASTM E1356	196°F
Adhesion to steel	ASTM D4541	3,000+ psi

APPLICATION NOTES

SURFACE PREPARATION

GENERAL: Surface should be clean and free of contamination such as greases, oils, or other residues. Clean with detergent wash or pH neutralizing agents then flush with fresh water. Abrasive blast metals to SSPC-SP10 "Near White Blast" standards with a 2-4 mil anchor profile to provide optimal adhesion performance.

BELOW WATER: Remove marine biological settlement and corrosion by high pressure water jetting with or without abrasive. Conventional air/abrasive blasting works well at shallow depths however efficiency falls off sharply below 10 feet. Hand held power tools such as needle guns or grinders can give good results in small areas. Apply within 45 minutes after surface preparation to minimize rusting or resettlement of biological fouling which interferes with adhesion.

MIXING PROCEDURES

This material is a two-component product, premeasured to produce the desired kit size once part A and B are mixed. For small kits, a Jiffy type mixer with a high torque motor is recommended for proper blending. Pour the curing agent into the base and mix for about 1 minute, taking care to reach all corners and walls to eliminate unmixed material. *Unmixed material will never harden.* Material may immediately be used.

For larger areas, application by heated plural spray should use the following equipment setup:

Mix ratio:	2/1 by volume
Fluid Pressure:	2,500 psi
Fluid Temp:	120 - 140°F
Tip Size:	.027" - .033"

APPLICATION

When applying as a tank lining, prepare the surface and apply an initial heavy "stripe coat" to all welds and sharp edges by brush or roller. Allow this stripe coat to cure until "gummy" before full coat application.

BIO-DUR 3000 may by immersed in fresh or salt water immediately after application. It will cure to a hard film within 24 hours and is suitable for traffic after this time. Allow at least three (3) days at 77°F before subjecting to aggressive chemical service from industrial solvents or similar materials.