

Powercrete® DD Abrasion Resistant Overlay

Liquid Epoxy Coating for the Protection of Fusion Bonded Epoxy in Directional Drilling Applications



Product Description

Powercrete is a tough liquid epoxy ARO (Abrasion Resistant Overlay) coating designed to protect FBE coated pipe during directional drilling applications to the: thrust bore, slick bore, river crossings. The product is applied directly on corrosion protection coating (FBE) to form a strong high-performance to the system capable to withstand rough terrain conditions - in directional drilling projects. **Powercrete DD** offers exceptional abrasion, strong, hardness, impact resistance, and adhesion properties when tested in the lab and more importantly under severe field applications. Since 1990 Powercrete has played a vital part of any successful horizontal directional drilling application in the US .

Typical Applications

- Directional Drilling
- Thrust (Slick) Bore
- Pipeline Protection in Any Severe Handling Application

Product Benefits & Features

- 100% Solids Liquid Epoxy; No V.O.C.s and no isocyanates.
Safe to use
- Maximum FBE Protection in Severe Rocky Soil Conditions
Superb Abrasion Resistance
- Excellent Mechanical Properties
Can be used in directional drill and thrust bore applications
- Bisphenol A Chemistry
Suitable for pipeline operating temperatures to 55°C (130°F)

Physical Properties

Property	Condition	Test Method	Typical Value	
			US Imperial	Metric
Hardness	(Shore D)	ASTM D-2240	85	85
Thin Film Water Absorption	(Saturation)	ASTM D-570	1.21 %	1.21 %
Dielectric Strength	(Oil)	ASTM D-149	450 volts/mil	17.7 volts/micron
Resistance to Acids & Alkalies		ASTM C-581	Excellent	Excellent
Adhesion to FBE		ASTM D-4541	2,500 psi	17 MPa
Impact Resistance	(40 mils thickness)	ASTM G-14-88	66 inch lbs	7.7 Joules(7.7 Nm)
Flexibility	(@ -18° C (0° F))	NACE RP-0394	0.75 ° - 1.4 °	0.75 ° - 1.4 °
Abrasion	(CS-17 wheel, wear cycles)	ASTM D-4060-95	1,563 cycles/mil	63 cycles/micron
Holiday Detection	Holiday free	ISO :21809-3 & CSA Z245.20	125 Volts per mil	5 Volts per micron
		ASTM G 62 Method B	84 Volts per mil	3.3 Volts per micron

Product Selection Guide

Maximum Operating Temp:	55°C (130°F)	Color:	Tan or Black
Compatible Line Coatings:	FBE	@ 65°C, 150°F	11 - 14 minutes
Mixing Ratio		Typical Single Coat Thickness	
By Volume	9.75:1 Part A to B	Manually Applied	20 mils (0.5 mm)
By Weight	100:5.5 Part A to B	Spray Applied	20 mils (0.5 mm)
Surface Profile Recommended:	2.5 - 4.0 mils (64-102 microns)	Recoat Interval (Spray)	
		@ 21°C, 70°F	37 - 111 minutes
Surface Preparation:	FBE coated surface shall be sweep blasted and thoroughly cleaned with air	Clean Up	Acetone, MEK, Toluene

Temperature Considerations

Powercrete® DD

If the surface to be coated is below 10°C (50°F), preheating of the substrate is recommended. Preheat temperatures should not exceed 82°C (180°F) prior to the application. Note: The application should only be done when the temperature of the steel is at least 3°C (5°F) higher than the dew point, as recommended by NACE.

Storage & Handling

For optimum performance, store Powercrete® DD epoxy products in a dry, well-ventilated area. Maintain products in original packaging and sealed until just before use. Avoid exposure to direct sunlight, rain, snow, dust or other adverse environmental conditions or contaminants.

NOTE:
Avoid prolonged storage at temperatures above 40°C (104°F) or below 5°C (40°F).

Cure Times

Pot Life: 4 Lbs (1.8 Kg) Kit, @ 25°C (77°F) Spray application	22 minutes
Gel Time: 40 mils, @ 27°C (80°F)	39 minutes
Dry Time: 40 mils, @ 27°C (80°F)	2.5 hours
65 Shore "D" Reading: 40 mils, @ 27°C (80°F)	7.75 hours
75 Shore "D" Reading: 40 mils, @ 27°C (80°F)	10 hours
Shelf Life (stored in specified conditions):	2 years

Ordering Information

Powercrete DD is available in three (3) packaging options:

Drum

Part A: 40 Gal / 151 L (600 Lbs/272 Kg)
Part B: 55 Gal / 208 L (450 Lbs/205 Kg)

Pail

Part A: 5 Gal / 19 L (75 Lbs/34 Kg)
Part B: 5 Gal / 19 L (40 Lbs/18 Kg)

Kit Options (Part A and B in proper mix ratio by weight)

20 Lbs / 9 Kg (1.3 Gal / 5 L)
10 Lbs / 4.5 Kg (0.67 Gal / 2.5 L)
4 Lbs / 1.8 Kg (0.27 Gal / 1 L)
2 Lbs / 0.9 Kg (0.13 Gal / 0.5 L)



Product Support and Additional Information

For additional information on delivery, application, training, appropriate equipment, sales and customer service, please visit www.berrycpg.com, call or email one of the worldwide locations listed below.

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