

# 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)	22 minutes
Spray application	
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](http://www.berrycpg.com), call or email one of the worldwide locations listed below.

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