

# Powercrete® J Liquid Epoxy



## Product Description

Powercrete J is the ultimate girth weld coating for FBE and CTE coated pipe. J is a single coat, 100% solids, high build epoxy that coats, repairs and rehabilitates pipelines operating at maximum temperatures up to 55°C (130°F) and other metal structures. This 2-component, solvent-free epoxy can easily achieve a dry film thickness of up to 20 mils in a single pass.

## Product Applications

- Pipe Bends, Fittings, Valves & Odd Shapes
- Pipeline Repair & Rehabilitation
- Girth Welds / Field Joints
- Directional Drilling
- Water Pipe OD
- Any bare steel structure in need of protection

## Product Features & Benefits

- 100% Solids Epoxy; No V.O.C.s and no isocyanates  
Safe to use
- Bisphenol A Chemistry  
Suitable for pipeline operating temperatures to 55°C (130°F)
- Excellent Mechanical Properties  
Can be used in directional drill and thrust bore applications
- High Build in a Single Application  
Cost saving formulation can build 20 mils in one pass
- Same Formula can be Hand or Spray Applied  
Flexibility in difficult to coat field conditions
- Excellent Wetting Properties to Bare Steel  
Exceptional adhesion, cathodic disbondment and soil stress resistance on bare steel



## Product Properties

Property	Condition	Test Method	Typical Value	
			US Imperial	Metric
Specific Gravity	(Mixed)	ASTM D-3289-03	1.70	1.70
Compressive Strength		ASTM C-109	16,000 psi	110 MPa
Hardness	(Shore D)	ASTM D-2240	85+	85+
Thin Film Water Absorption	(Saturated)	ASTM D-570	0.85 %	0.85 %
Dielectric Strength	(Oil)	ASTM D-149	485 volts/mil	19 volts/micron
Resistance to Acids & Alkalies		ASTM C-581	Excellent	Excellent
Adhesion to				
FBE		ASTM D-4541	3,280 psi	22 MPa
Bare Steel		ASTM D-4541	3,850 psi	26 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 °	0.75 °
Tabor Abrasion	(CS-17 wheel, wear cycles)	ASTM D-4060-95	1,250 cycles/mil	49 cycles/micron
Cathodic Disbondment				
55°C (130°F)	30 days	ASTM G-95	0.33 inch	8.5 mm
50°C (122°F)	90 days	ASTM G-95	0.63 inch	16.0 mm
Holiday Detection	Holiday free	ISO :21809-3 & CSA Z245.20 ASTM G 62 Method B	125 Volts per mil 84 Volts per mil	5 Volts per micron 3.3 Volts per micron

## Product Selection Guide

Maximum Operating Temp	55°C (130°F)	Color	Brown
Compatible Line Coatings	FBE, CTE	Typical Single Coat Thickness	
Mixing Ratio		Manually Applied	20 mils (0.5 mm)
By Volume	4.8:1 Part A to B	Spray Applied	20 mils (0.5 mm)
By Weight	100:11.2 Part A to B	Recoat Interval (Spray)	
Surface Profile Recommended	2.5 - 4.0 mils 63.5 - 101.6 microns	@ 21°C, 70°F	26 - 83 minutes
Surface Preparation	SA 2 1/2 SSPC-10 - Near-White SSPC-SP5 - White	@ 65°C, 150°F	7 - 10 minutes
		Clean Up	Acetone, MEK

Typical Application

Hand Apply		Spray Apply	Waste Factor													
	<b>Theoretical Coverage Rates</b> 425 mil-sq. ft./litre 1605 mil-sq. ft./US gallon 1.0 mm-m <sup>2</sup> /litre		(approx.)													
	<b>Recommended Tip Sizes</b> <table border="1"> <thead> <tr> <th>Tip Size</th> <th>Pipe Size (DN)</th> <th>Flow Rates (approx.)</th> </tr> </thead> <tbody> <tr> <td>331</td> <td>to 12" (DN300)</td> <td>19tip = 1.1 L / min.</td> </tr> <tr> <td>419/431</td> <td>12"-16" (DN300-400)</td> <td>31tip = 2.8 L / min.</td> </tr> <tr> <td>519/531</td> <td>16"-24" (DN400-600)</td> <td></td> </tr> <tr> <td>619/631</td> <td>24"-48" (DN600-1200)</td> <td></td> </tr> </tbody> </table> <p>Note: Fluid pressure at tip Approx. 3,500 psi.</p>		Tip Size	Pipe Size (DN)	Flow Rates (approx.)	331	to 12" (DN300)	19tip = 1.1 L / min.	419/431	12"-16" (DN300-400)	31tip = 2.8 L / min.	519/531	16"-24" (DN400-600)		619/631	24"-48" (DN600-1200)
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Temperature Considerations

If the surface to be coated is below 10°C (50°F), preheating of the substrate is recommended. Preheat temperatures should not exceed 93°C (200°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® J 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 contaminates.

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)	20 minutes
Spray Application	
Gel Time: 20 mils, @ 27°C (80°F)	30 minutes
Dry Time: 20 mils, @ 27°C (80°F)	105 minutes
65 Shore "D" Reading: 20 mils, @ 27°C (80°F)	4.20 hours
75 Shore "D" Reading: 20 mils, @ 27°C (80°F)	5.20 hours
Application Temp Range:	-30 to 100°C -20 to 212°F
Shelf Life(stored in specified conditions):	2 years

Ordering Information

Powercrete J comes is available in three (3) packaging options:

Drum

Part A: 600Lb-272 Kg  
Part B: 400Lb-181.44 Kg

Pail

Part A: 75 Lbs/34 Kg  
Part B: 40 Lbs/18 Kg

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

20 Lbs / 9 Kg  
10 Lbs / 4.5 Kg  
4 Lbs / 1.8 Kg  
2 Lbs / 0.9 Kg



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