

# Powercrete® R-95 Liquid Epoxy



## Product Description

Powercrete R-95 is a single coat, 100% solids, high build epoxy novolac that coats, repairs and rehabilitates pipelines operating at maximum temperatures up to 95°C (203°F). As an abrasion resistant overlay (ARO) it is compatible with FBE and CTE mainline coatings and can be used on any metal structure. This 2-component, solvent-free epoxy can easily achieve a dry film thickness of up to 40 mils in a single application and can be hand or spray applied.

## Typical Applications

- Pipeline Repair & Rehabilitation
- Girth Welds / Field Joints
- Pipe Bends, Fittings, Valves & Odd Shapes
- 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
- Novolac Chemistry  
Greater surface tolerance and chemical resistance
- Excellent Wetting Properties to Bare Steel  
Exceptional adhesion and cathodic disbondment resistance
- Same Formula for Hand or Spray Application  
Reduce inventory  
Easy selection to avoid errors
- High Build in a Single Application  
Save time by applying 40+ mils in a single pass
- Excellent Mechanical Properties  
Used in directional drill and thrust bore applications

## Physical Properties

Property	Condition	Test Method	Typical Value	
			US Imperial	Metric
Specific Gravity	(Mixed)	ASTM D-3289-03	1.64	1.64
Compressive Strength		ASTM C-109	14,660 psi	110 MPa
Hardness	(Shore D)	ASTM D-2240	85	85
Thin Film Water Absorption	24 Hrs	ASTM D-570	0.15 %	0.15 %
Dielectric Strength	(Oil)	ASTM D-149	690 volts/mil	27 volts/micron
Resistance to Acids & Alkalies		ASTM C-581	Excellent	Excellent
Adhesion to				
FBE		ASTM D-4541	3,400 psi	23.44 MPa
Bare Steel		ASTM D-4541	3,550 psi	24.48 MPa
Impact Resistance	(40 mils thickness)	ASTM G-14-88	57 inch lbs	6.4 Nm/6.4 Joules
Flexibility	(Degrees per pipe diameter)	NACE RP-0394	< 0.6 °	< 0.6 °
Tabor Abrasion	(CS-17 wheel, wear cycles)	ASTM D-4060-95	780 cycles/mil	30 cycles/micron
Cathodic Disbondment	30 days			
23°C (73°F)		ASTM G-8	0.2 inch	4.0 mm
95°C (203°F)		ASTM G-42	0.3 inch	8.0 mm

## Product Selection Guide

Maximum Operating Temp	95°C (203°F)	Color	Gray
Compatible Line Coatings	FBE, CTE	Typical Single Coat Thickness	
Mixing Ratio		Manually Applied	40 mils (1.0 mm)
By Volume	3.6:1 Part A to B	Spray Applied	40 mils (1.0 mm)
By Weight	100:16 Part A to B	Recoat Interval (Spray)	
Surface Profile Recommended	2.5 - 4.0 mils	@ 21°C, 70°F	34 - 60 minutes
	63.5 - 101.6 microns	@ 65°C, 150°F	4 - 7 minutes
Surface Preparation	SA 2 1/2	Clean Up	Acetone, MEK
	SSPC-10 - Near-White		
	SSPC-SP5 - White		

Typical Application

Hand Apply



Theoretical Coverage Rates

425 mil-sq. ft./litre  
1605 mil-sq. ft./US gallon  
1.0 mm-m<sup>2</sup>/litre

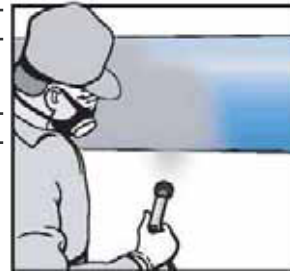
Recommended Tip Sizes

Tip Size	Pipe Size (DN)
331	to 12" (DN300)
419/431	12"-16" (DN300-400)
519/531	16"-24" (DN400-600)
619/631	24"-48" (DN600-1200)

Flow Rates (approx.)  
19tip = 1.1 L / min.  
31tip = 2.8 L / min.

Note: Fluid pressure at tip  
Approx. 3,500 psi.

Spray Apply



Waste Factor

(approx.)	
10%	Kit Application
15%	20" + pipe OD
25%	14"-18" pipe OD
35%	2"-12" pipe OD

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 100°C (212°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® R-95 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 Kit (1.82 Kg), @ 25°C (77°F) 14 minutes

Spray Application

Gel Time: 40 mils, @ 27°C (80°F) 31 minutes

Dry Time: 40 mils, @ 27°C (80°F) 77 minutes

65 Shore "D" Reading: 40 mils, @ 27°C (80°F) 2.2 hours

75 Shore "D" Reading: 40 mils, @ 27°C (80°F) 5 hours

Application Temp Range -30 to 100°C  
-20 to 212°F

Shelf Life (stored in specified conditions): 2 years

Ordering Information

Powercrete R-95 is available in three (3) packaging options:

Drum

Part A: 40 Gal / 153 L (625 Lbs / 283.5 Kg)

Part B: 46 Gal / 176 L (400 Lbs / 181.4 Kg)

Pail

Part A: 4 Gal / 15.1 L (61.7 Lbs / 28 Kg)

Part B: 4.6 Gal / 17.4 L (39.5 Lbs / 18 Kg)

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

20 Lbs / 9.08 Kg (1.44 Gal / 5.44 L)

10 Lbs / 4.53 Kg (0.72 Gal / 2.7 L)

4 Lbs / 1.82 Kg (0.29 Gal / 1.09 L)

2 Lbs / 0.91 Kg (0.14 Gal / 0.54 L)





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