

Powercrete® PW Liquid Epoxy



Product Description

Powercrete PW is a liquid epoxy polymer coating designed for use as a pipe lining for potable and wastewater pipes and storage tanks. Powercrete PW is an **NSF/ANSI Standard 61 certified at 60°C (140°F)** and also **approved by WRc-NSF, UK** for its meeting the requirements of standard **BS:6920**. Powercrete PW is also very effective for slurries and abrasive applications. PW offers maximum protection from corrosion as it provides high adhesion to bare steel and ductile iron along with superior abrasion resistance.

Product Applications

- ID / OD Coating for: Potable & Wastewater Pipes & Storage Tanks
- Directional Drilling
- Pipe Bends, Fittings, Valves & Odd Shapes
- Any bare steel structure in need of protection



Product Features & Benefits

- 100% Solids Liquid Epoxy; No V.O.C.s and no isocyanates
Safe to use
- Bisphenol A Epoxy Suitable for pipeline operating temperature to 60°C (140°F)
- Suitable for Potable Water
NSF/ANSI Standard 61 Certified - Certificate # 71121-03; Exceeds AWWA C210 requirements
Meets requirements of BS:6920 standard Approved by WRc-NSF, UK
- 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	1.79	1.79
Compressive Strength		ASTM C-109	10,000 psi	70 MPa
Dielectric strength	(in Oil)	ASTM D-149	540 volts/mil	21.2 volts/micron
Volume Resistivity		ASTM D-257	1.01 X 10 ¹⁴ Ohm-cm	1.01 X 10 ¹⁴ Ohm-cm
Hardness	(Shore D)	ASTM D-2240	≥ 85	≥ 85
Thin Film Water Absorption		ASTM D-570	1.35%	1.35%
Resistance to Acids & Alkalies		ASTM C-581	Excellent	Excellent
Adhesion to				
FBE		ASTM D-4541	2500 psi	17 MPa
Bare Steel(Abrasive blasted steel)		ASTM D-4541	3000 psi	20 MPa
Impact Resistance	(Avg. 40 mils thickness)	ASTM G-14-04	55 inch-lbs	6.3 Joules (6.3 Nm)
Flexibility	(@ 75°F (24°C))	NACE RP-0394	0.75° - 0.99° /PD	0.75° - 0.99° /PD
Taber Abrasion	(CS-17 wheel, 1000 gms, 1000 cycles)	ASTM D-4060-07	1429 cycles/mil 77 mg (weight loss)	56 cycles/micron 77 mg (weight loss)
Cathodic Disbondment				
25° C (77° F)	30 days	ASTM G-95-87 (1998)	< 0.098 inch	< 2.5 mm
43° C (110° F)	30 days	ASTM G-95	< 0.31 inch	< 8 mm
Tensile Strength		ASTM D-638-08	3700 psi	25.5 MPa
% Elongation at Break		ASTM D-638-08	3.9 %	3.9 %
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

Property as per AWWA C-210-07

Property	Condition	Test Method	Typical Value	
			US Imperial	Metric
Adhesion				
X-Cut adhesion	(Abrasive blasted steel)	ASTM D-3359 (Method A)	Better than 4A	Better than 4A
Pull-off adhesion	(Abrasive blasted steel)	ASTM D-3289-03	3000 psi	20 MPa
Cathodic Disbondment	@ 24°C (75°F), 30 days	ASTM G-8-96 (2003)	< 0.12 inch	< 3 mm
Immersion & Vapor phase				
Deionized water	30 days	AWWA C-210	Pass (no effect)	Pass (no effect)
Sulphuric Acid, 1% by wt.	30 days	AWWA C-210	Pass (no effect)	Pass (no effect)
Sodium Hydroxide, 1% by wt.	30 days	AWWA C-210	Pass (no effect)	Pass (no effect)

Cure Tests (Solvent rub and Pencil hardness tests) and Holiday detection test as per AWWA C-210-07 also passes.

Product Selection Guide

Maximum Operating Temp	60°C (140°F)	Color	Tan or Black
Compatible Line Coatings	FBE, CTE	Typical Single Coat Thickness	
Mixing Ratio		Manually Applied	0.5 mm (20 mils)
By Volume	9.75:1 Part A to B	Spray Applied	0.5 mm (20 mils)
By Weight	100:5.5 Part A to B	Recoat Interval (Spray)	
Surface Profile Recommended	2.5 - 4.0 mils	@ 21°C, 70°F	37 - 111 minutes
	64 - 100 microns	@ 65°C, 150°F	11 - 14 minutes
Surface Preparation	SA 2 1/2	Clean Up	Acetone, MEK
	SSPC-10 - Near-White		
	SSPC-SP5 - White		

Typical Application

Hand Apply

Spray Apply

Waste Factor



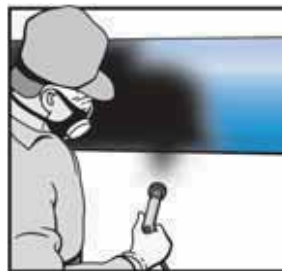
Theoretical Coverage Rates

425 mil-sq. ft./litre
1605 mil-sq. ft./US gallon
1.0 mm-m²/litre

Recommended Tip Sizes

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)	

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



(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 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® PW 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)	37 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
Application Temp Range":	-30 to 100°C
	-20 to 212°F
Shelf Life:(stored in specified conditions):	2 years

Ordering Information

Powercrete PW 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)



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