

Powercrete[®] YGE Liquid Epoxy



Product Description

Powercrete YGE is engineered and in compliance with, meeting and or exceeding AWWA C-210 Standards for protection on small and large diameter water pipe, specials, fittings, and other metal structures. YGE is a single coat, 100% solids, fast setting 2-component, solvent-free epoxy that can easily achieve a dry film thickness of up to 30 mils in a single application.

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 & Customer Benefits

- 100% Solids Epoxy
No V.O.C.s and no isocyanates
- Excellent Mechanical Properties
Can be used in directional drill and thrust bore applications
- High Build in a Single Application
Cost saving formulation can build 30 mils in one pass
- Excellent Resistance to Water Immersion
Can be buried within close contact of seawater and ground waters over a broad pH range
- 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	1.67	1.67
Compressive Strength		ASTM C-109	14,791 psi	101 MPa
Hardness	(Shore D)	ASTM D-2240	85	85
Thin Film Water Absorption		ASTM D-570	0.096 %	0.096 %
Dielectric Strength	(Oil)	ASTM D-149	580 V/mil	25.8 V/micron
Resistance to Acids & Alkalies		ASTM C-581	Excellent	Excellent
Adhesion to Bare Steel		AWWAC210	Excellent	Excellent
Impact Resistance	(35 mils thickness)	ASTM D-4541	2,350 psi	16 MPa
Flexibility	(@ -18°C (0°F))	ASTM G-14-88	54 inch lbs	6 Nm/6Joules
Tabor Abrasion	(CS-17 wheel, wear cycles)	NACE RP-0394	< 0.73 °	< 0.73 °
Cathodic Disbondment	30 days	ASTM D-4060-95	972 cycles/mil	38.3 cycles/micron
	25°C (77°F)	ASTM G-95	0.12 inch	3 mm

Product Selection Guide

Maximum Operating Temp	60°C (140°F)	Color	White
Compatible Line Coatings	FBE, CTE	Typical Single Coat Thickness	
Mixing Ratio		Manually Applied	30 mils (0.75 mm)
By Volume	4.8:1 Part A to B	Spray Applied	30 mils (0.75 mm)
By Weight	100:11.2 Part A to B	Recoat Interval (Spray)	
Surface Profile	2.5 - 4.0 mils	@ 21°C, 70°F	26 - 83 minutes
(Recommended)	63.5 - 101.6 microns	@ 65°C, 150°F	7 - 10 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-m ² /litre		(approx.)										
	Recommended Tip Sizes		10% Kit Application										
	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Tip Size</th> <th>Pipe Size (DN) to 12" (DN300)</th> <th>Flow Rates (approx.) 19tip = 1.1 L / min. 31tip = 2.8 L / min.</th> </tr> <tr> <td>419/431</td> <td>12"-16" (DN300-400)</td> <td></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> </table> <p style="font-size: small;">Note: Fluid pressure at tip approx. 3,500 psi.</p>		Tip Size	Pipe Size (DN) to 12" (DN300)	Flow Rates (approx.) 19tip = 1.1 L / min. 31tip = 2.8 L / min.	419/431	12"-16" (DN300-400)		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® YGE 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)	20 minutes
Spray application	
Gel Time: 40 mils, @ 27°C (80°F)	30 minutes
Dry Time: 40 mils, @ 27°C (80°F)	105 minutes
65 Shore "D" Reading: 40 mils, @ 27°C (80°F)	4.20 hours
75 Shore "D" Reading: 40 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 YGE is available in three (3) packaging options:

Drum

- Part A: 48Gal/182Lt (714Lb/324Kg)
- Part B: 48.4G/183L (400Lb/181Kg)

Pail

- Part A: 4.8Gal/18.2Lt(71.4Lb/32.4Kg)
- Part B: 4.8G/18.3L (40Lb/18.1Kg)

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

- 20 Lbs / 9 Kg (1.4 Gal / 5.4 L)
- 10 Lbs / 4.5 Kg (0.7 Gal / 2.7 L)
- 4 Lbs / 1.8 Kg (0.3 Gal / 1.1 L)
- 2 Lbs / 0.9 Kg (0.14 Gal / 0.5 L)



Berry Plastics warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the technical data sheet when used in compliance with Berry Plastics written instructions. Since many installation factors are beyond the control of Berry Plastics, the user shall determine the suitability of the products for the intended use and assume all risks and liabilities in connection herewith. Berry Plastics liability is stated in the standard terms and conditions of sale. Berry Plastics makes no other warranty either expressed or implied. All information contained in this technical data sheet is to be used as a guide and is subject to change without notice. This technical data sheet supersedes all previous data sheets on this product.

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