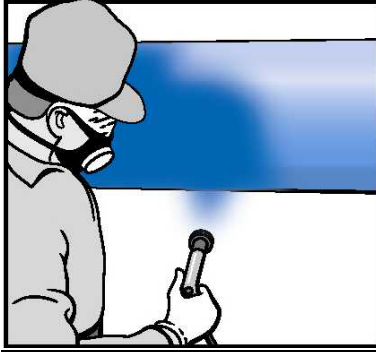
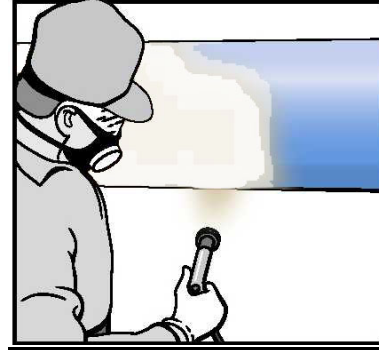




Powercrete® YGE



Powercrete® YGE (High Build & Fast Setting) is designed to provide AWWA C210 compliant corrosion protection to small & large diameter water pipe & other metal structures with operating temperature up to 140°F (60°C)



Product description

Powercrete® YGE is a newly formulated 100% (NO VOC) Solids Epoxy Coating, which combines the optimum qualities of mechanical protection with those of superior corrosion protection. Spray applied, it is possible to achieve a DFT of 30 mils (0.75mm) with no drips or sags. The result is an epoxy based polymer coating, capable of providing excellent corrosion protection of lines operating at temperatures up to 140°F (60°C).

Powercrete® YGE is a highly abrasion and impact resistant corrosion coating that is ideally suited for the protection of field joints, bends, Tees, valves and odd shapes. It is applied over clean, bare steel or ductile iron. YGE was specifically developed and tested for the large diameter water pipe and special pipe constructions, but is equally suited for the rehabilitation of pipelines as well as the protection of girth welds. It is compatible with all plant-applied coatings. It can also be used for many other pipeline, marine, and industrial applications including linings.

Product Application

Powercrete® YGE is designed for either manual or spray application. When manually applied it is mixed and poured onto the pipe surface. Then it is smoothed with a Powercrete® YGE trowel (short bristle brush or roller) to a uniform thickness. Both spray and manual application can yield a thickness of approximately 0.040" (1 mm). However, higher builds can be achieved.

When Powercrete® YGE is manually applied at an atmospheric temperature of about 77°F (25°C), it gels to a smear free coat in approximately 30 minutes. It will reach Shore D 75 hardness in less than 6 hours. At full cure (approximately 24 hours), it has a typical Shore D hardness scale of 85 or higher and is therefore ready for use. It may be applied to a heated substrate to 212°F (100°C) to shorten the gel and cure time. Once fully cured, it has excellent abrasion and impact resistance. It also provides an excellent cathodic disbondment rating on the steel surface of water, gas and oil pipelines. Note: With a post-cure of 2 hours of at 180°-200°F (82°-94°C), the performance of the coating will be greatly enhanced.

Product features/benefits

- Excellent cathodic disbondment resistance.
- Maximum adhesion to bare steel.
- Excellent mechanical properties.
- Excellent resistance to water immersion, seawater, and ground waters over a broad pH range.
- 100% volume solids content, no V.O.C.'s.

Product selection guide

- | | |
|---------------------------------|--|
| • Maximum operating temperature | 140°F (60°C). |
| • Compatible line coatings | FBE, CTE (see note below) |
| • Recommended pipe preparation | SA 2 ^{1/2} or SSPC-10/SSPC-SP5 SP 5/NACE 1 White Metal Blast Cleaning, SP 10/NACE 2 Near-White Blast Cleaning |

Note: special procedures may apply depending on the line coating.

Product thickness (DFT)

- | | |
|-------------------------------|------------------|
| • Single coat – brush applied | 0.030" (0.75 mm) |
| • Single coat – spray applied | 0.030" (0.75 mm) |

Product properties

	ENGLISH	METRIC	TEST METHOD
Specific Gravity	1.67	1.67	
Compressive Strength	12,000 psi	82,737 kilopascals	ASTM C-109
Cubed Water Absorption			
After immersion	0.024%	0.024%	ASTM C-642
After immersion and boiling	0.115%	0.115%	ASTM C-642
Thin Film Water Absorption after 134 days	0.803%	0.803%	ASTM D-570
Dielectric Strength (in oil)	485 volts/mil	19.1 volts/micron	ASTM D-149
Resistance to Acids and Alkalies	Excellent	Excellent	ASTM C-581
Adhesion to Fusion Bonded Epoxy	>3600 psi	>24,821 kilopascals	ASTM D-4541
Adhesion to Coal Tar Enamel*	>280 psi	>1,930 kilopascals	ASTM D-4541
Adhesion to Bare Steel > 2 mils surface profile	>4,000 psi	>27,579 kilopascals	ASTM D-4541
Impact Resistance Film thickness 35 mils	66 inch lbs	7.7 Nm	ASTM G-14
Flexibility degrees per pipe diameter	<0.73°	<0.73°	NACERP-0394 Taber Abrasion
H-18 Wheel, wear cycles	79.4 cycles/mil	3.1 cycles/micron	ASTM D-4060
CS-17 Wheel, wear cycles	972 cycles/mil	38.3 cycles/micron	ASTM D-4060
Cathodic Disbondment			ASTM G-8
30 days, 75°F (24°C)	<0.2 inch	<5 mm	
90 days, 75°F (24°C)	0.4 inch	9mm	

* Exceeds internal bond of the coal tar enamel

Ordering information

Powercrete® YGE products are available:

- In drums: Base: PC-YGE-PART-A-40.4GAL-152.9L (600 lb/272.2 kg)
Hardener: PC-YGE-PART-B-48.4GAL-183.3L (400 lb/181.4 kg)
- In pails: Base: PC-YGE-PART-A-5GAL-19.1L (75 lb/34 kg)
Hardener: PC-YGE-PART-B-4.8GAL-18.3L (40 lb/18.1 kg)
- In kits containing base and hardener in the proper 4.8 PART A : 1 PART B by volume
PC-YGE-2lb-0.9kg-kit (0.14GAL-0.54L)
PC-YGE-4lb-1.8kg-kit (0.3GAL-1.08L)
PC-YGE-10lb-4.5kg-kit (0.7GAL-2.7L)
PC-YGE-20lb-9kg-kit (1.4GAL-5.4L)

Mixing Ratio: 4.8:1 PART A to PART B by volume
100:11.2 PART A to PART B by weight.

Application accessories such as stirrers, pads and rollers are also available and may be ordered separately, see datasheet accessories.

Tyco Adhesives warrants that the product conforms to its chemical and physical description and its appropriate for the use stated on the technical data sheet when used in compliance with Tyco Adhesives' written instructions. Since many installation factors are beyond our control, the user shall determine the suitability of the products for the intended use and assume all risks and liabilities in connection herewith. Tyco Adhesives' liability is stated in the standard terms and conditions of sale. Tyco Adhesives 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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