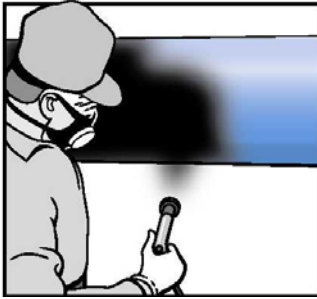
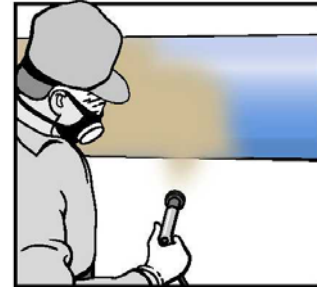




# Powercrete® (DD)



Epoxy polymer coating designed for use in directional drill and slick bore applications. Powercrete® provides maximum protection and adhesion to the fusion bonded epoxy coating. Operating up to 130°F (55°C).



## Product description

Powercrete® is an epoxy-based polymer. Its main purpose is to **protect the fusion bonded epoxy coating** on steel pipe under severe handling conditions. The highly abrasion resistant Powercrete® provides a smooth surface that allows the pipeline to be pulled under the crossing in a “slick bore” operation with much less drag resistance than conventional concrete. It can also be used for directional drills, bottom tow applications on submarine pipelines, and as a rockshield.

Powercrete® is sprayed onto the pipe and results in a hard, smooth surface. Each spray pass results in a thickness of approximately 0.020” (0.508mm). Depending on the pipe diameter, multiple passes may be applied in order to build up to the desired thickness, ranging from 0.020” (0.508 mm) to 0.125” (3.175 mm) thick. There is no laminating, therefore a homogeneous layer of cured Powercrete® results.

At an ambient temperature of about 90°F (32°C), it gels to a smear free surface in about 30 minutes. It is hard after 4 hours, has a very high strength after 24 hours, and reaches full cure and maximum strength after 7 days. After 24 hours, it has a typically minimum reading on the Shore D hardness scale of 75 and is therefore ready to be used for most applications.

Should any damage occur to the Powercrete® the area can be repaired easily by using the same material over the clean and dry surface.

## Product features/benefits

- Thickness of only 0.020” (0.508 mm) to 0.125” (3.175 mm).
- Maximum adhesion to fusion bonded epoxy coatings.
- Maximum protection for fusion bonded epoxy coatings.
- Reduced diameter of bore hole.
- Barrier coating over fusion bonded epoxy coatings prior to concrete application.
- 100% volume solids content, no V.O.C's.
- Light weight - Powercrete® weighs 0.184 lbs/ft<sup>2</sup> at 0.020” (0.580 mm) thickness.

*Example: A 40ft (12.2 m) length of 42” (1,067 mm) pipe with a 0.125” (3.175 mm) thickness of Powercrete® is increased in weight by only 487 lbs (221 kg), versus an increase in weight of 7,960 lbs (3,611 kg) for 1.5” (38 mm) of conventional concrete.*

## Product selection guide

- |                                 |   |
|---------------------------------|---|
| • Maximum operating temperature | 130°F (55°C)                            |
| • Compatible line coatings      | FBE, CTE                                |
| • Recommended pipe preparation  | SA 2 <sup>1/2</sup> or SSPC-10/SSPC-SP5 |

## Product thickness (DFT)

- |                               |                   |
|-------------------------------|-------------------|
| • Single coat – brush applied | 0.020” (0.508 mm) |
| • Single coat – spray applied | 0.020” (0.508 mm) |

## Product properties

	ENGLISH	METRIC	TEST METHOD
Specific Gravity	110 lbs/ft <sup>3</sup>	1.761 Kg/m <sup>3</sup>	
Compressive Strength	10,000 psi	7,000,000 Kg/m <sup>2</sup>	ASTM C-109
Cubed Water Absorption			
After immersion	0.035%	0.035%	ASTM C-642
Thin Film Water Absorption	1.21%	1.21%	ASTM D-570
Dielectric Strength (in oil)	450 volts/mil	17,700 volts/micron	ASTM D-149
Resistance to Acids and Alkalies	Excellent	Excellent	ASTM C-581
Adhesion to Fusion Bonded Epoxy	2,500 psi	1,750,000 Kg/m <sup>2</sup>	ASTM D-4541
Impact Resistance Film thickness 35 mils	66 inch lbs	7.7 Nm	ASTM G-14
Flexibility degrees per pipe diameter	0.75°-1.4°	0.75°-1.4°	NACERP-0394
Abrasion Resistance	3.4% loss	3.4% loss	ASTM C-131
Taber Abrasion			
H-18 Wheel, wear cycles	66.7 cycles/mil	2.6 cycles/micron	ASTM D-4060
CS-17 Wheel, wear cycles	1,562.5 cycles/mil	461.5cycles/micron	ASTM D-4060
Cathodic Disbondment 48 hrs, 150°F (66°C)	<0.16 inch	<4 mm	ASTM G-8

## Ordering information

Powercrete® products are available:

- In drums: Base: PC-PART-A-39GAL-147.4L (600 lb/272.2 kg)  
Hardener: PC-PART-B-55GAL-208.3L (450 lb/204.1kg)
- In pails: Base: PC-PART-A-4.9GAL-18.5L (75 lb/34 kg)  
Hardener: PC-PART-B-4.8GAL-18.4L (40 lb/18.1 kg)
- In kits containing base and hardener in the proper 9.75 PART A: 1 PART B by volume  
PC-20lb-9kg-kit (1.34GAL-5.1L)  
PC-10lb-4.5kg-kit (0.67GAL-2.5L)  
PC-4lb-1.8kg-kit (0.27GAL-1L)  
PC-2lb-0.9kg-kit (0.13GAL-0.5L)

Mixing Ratio: 9.75:1 PART A to PART B by volume  
100:5.5 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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