



# Powercrete® R60



**Powercrete<sup>®</sup> R60 is a high build 100% solids epoxy designed to provide excellent corrosion protection of steel pipelines and fittings operating up to 60 °C (140 °F) temperatures**



## Product description

**Powercrete<sup>®</sup> R60** is a Medium-Temperature/High-Build, liquid epoxy coating designed specifically for the corrosion protection of buried steel pipe operating at temperatures up to 140°F (60°C).

R60 is ideally suited for the corrosion protection of girth weld areas, valves, fittings, and for the rehabilitation of pipelines with deteriorated coatings. R60 is a 2-component, solvent-free epoxy that can easily achieve a final dry film thickness of up to 35 mils (890 microns) in a single coat, without drips or sags. R60 combines the adhesion, toughness and anti-corrosion properties of epoxy with the ease of application of a liquid coating. Contains no V.O.C.'s or isocyanates.

## Product Application

Powercrete<sup>®</sup>R60 may be either manually or spray applied on to the pipe. Prior to application, blast-clean the steel surface to SA 2½ (SSPC-10/SSPC-SP5).

For manual application, simply mix together the 2-components of Powercrete<sup>®</sup>R60 and pour onto the pipe. Using the Powercrete<sup>®</sup> trowel, a brush or a roller, smooth the epoxy to a uniform thickness. Use a wet-film-gauge to measure coating thickness.

Spray application of Powercrete<sup>®</sup> R60 is accomplished using plural component, hot airless spray equipment. When spray applied, each spray pass results in a thickness of approximately 30 mils (750 microns). However, higher single pass builds can be achieved depending on application temperatures, equipment and operator skill. Additionally, multiple passes may be applied in order to build up to the desired thickness.

When Powercrete<sup>®</sup> R60 is spray applied at an atmospheric temperature of about 90°F (32°C), it gels to a smear free surface in about 20 minutes. It is hard after 2 hours and will fully cure in less than 4 hours. After 4 hours, it typically has a minimum reading on the Shore D hardness scale of 75 and is therefore ready for use. It may be applied at temperatures below 50°F (10°C) if the pipe is heated during the application and cure. Once it is fully cured, Powercrete<sup>®</sup> R60 has excellent abrasion and impact resistance. It also provides an excellent cathodic disbondment rating on pipelines operating at less than 140°F (60°C).

## 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, EXT.PE          |
| ☞ Recommended pipe preparation  | SA 2½ or SSPC-10/SSPC-SP5 |

## 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	0.050%	0.050%	ASTM C-642
After immersion and boiling	0.139%	0.139%	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 $\nabla$	<0.73 $\nabla$	NACERP-0394 Taber Abrasion
H-18 Wheel, wear cycles	67 cycles/mil	2.6 cycles/micron	ASTM D-4060
CS-17 Wheel, wear cycles	1,250 cycles/mil	49.2 cycles/micron	ASTM D-4060
Cathodic Disbondment			ASTM G-8
30 days, 75 $\nabla$ F (24 $\nabla$ C)	<0.2 inch	<5 mm	
90 days, 75 $\nabla$ F (24 $\nabla$ C)	0.4 inch	9mm	

\* Exceeds internal bond of the coal tar enamel

## Ordering information

Powercrete<sup>®</sup> R60 products are available:

- In drums: Base: PC-R60-PART-A-40.4GAL-152.9L (600 lb/272.2 kg)  
Hardener: PC-R60-PART-B-48.4GAL-183.3L (400 lb/181.4 kg)
- In pails: Base: PC-R60-PART-A-5GAL-19.1L (75 lb/34 kg)  
Hardener: PC-R60-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-R60-2lb-0.9kg-kit (0.14GAL-0.54L)  
PC-R60-4lb-1.8kg-kit (0.3GAL-1.08L)  
PC-R60-10lb-4.5kg-kit (0.7GAL-2.7L)  
PC-R60-20lb-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.*

**Headquarters:**  
Tyco Adhesives L.P.  
1400 Providence Hwy  
Norwood, MA 02062 USA  
Int'l Tel: +1 781 440-6161  
US Toll Free: +1 800 248-0149  
Fax: +1 781 440-6271  
E-mail: [CPG@tycoadhesives.com](mailto:CPG@tycoadhesives.com)

**In the Americas:**  
Tyco Adhesives  
1675 Suite C Brandywine Avenue  
Chula Vista, CA91911 USA  
Tel: Mexico +52 664 607 0926  
Tel: US +1 619 4 24 42 59  
Fax: Mexico +52 664 623 64 63  
Fax: US +1 619 4 24 42 58  
E-mail: [CPGTJ@tycoadhesives.com](mailto:CPGTJ@tycoadhesives.com)

Tyco Adhesives (Houston)  
11010 Wallisville Road  
Houston, TX 77013 USA  
Tel: +1 713 676 0085  
US Toll Free: +1 888 676 7202  
Fax: +1 713 676 0086  
E-mail: [CPGH@tycoadhesives.com](mailto:CPGH@tycoadhesives.com)

**In Europe, Middle East, Africa,  
Asia & Pacific:**  
Tyco Adhesives B.V.B.A.  
Nieuwlandiaan B15  
B-3200 Aarschot, Belgium  
Tel: 32 16 55 36 00  
Fax: 32 16 55 36 74  
E-mail: [CPGE@tycoadhesives.com](mailto:CPGE@tycoadhesives.com)

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**Adhesives**  
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