

Ultra FBE

Fusion Bond Epoxy external pipe coating system

ENERGY & MINING



Ultra FBE (Fusion Bond Epoxy) coating was developed for long term external corrosion protection of pipelines. Ultra FBE consists of a single layer fusion bond epoxy applied to heated, abrasively cleaned pipe.

Product Features

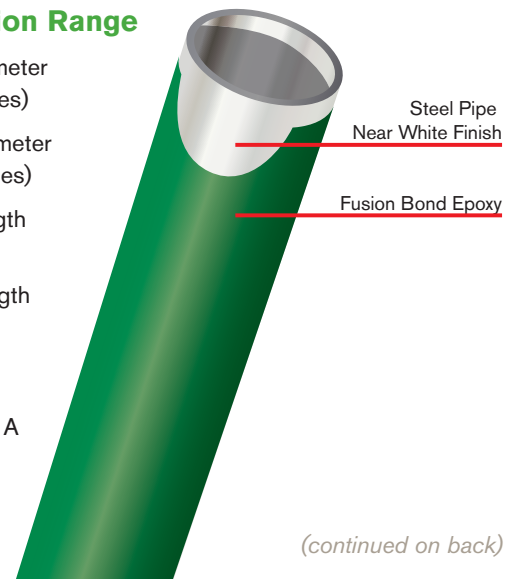
- Standard Fusion Bond Epoxy powders are designed for operating temperatures between -40°C and 65°C. Depending on manufacturer's recommendations and environment the pipeline is operating in, temperature ratings may be able to exceed 65°C
- Intended for use as an external coating system for buried or submerged pipelines transporting oil, gas or water
- Offers excellent adhesion and cathodic disbondment resistance
- Developed for moderate to high temperatures depending on environmental conditions

Pipe Application Range

- Minimum Pipe Diameter
 - 88.9mm (3.5 inches)
- Maximum Pipe Diameter
 - 1524mm (60 inches)
- Minimum Pipe Length
 - 5.5m (18 feet)
- Maximum Pipe Length
 - 25m (82 feet)

Compliance

CSA Z245.2010 1A
ISO 9001:2008



(continued on back)

Typical Properties and Performance Characteristics

Fusion Bond Epoxy Properties per CSA Z245.20-10 System 1A

Test	Conditions	Requirements	Typical Values
Adhesion	24 hours @ 75°C	Rating 1 - 3	Rating 1 - 2
Cathodic disbondment	28 days @ 20°C @ 1.5V	≤ 8.5mm	4.0mm
Cathodic disbondment	24 hours @ 65°C @ 3.5V	≤ 11.5mm	3.0mm
Porosity		Rating 1 - 4	Rating 1 - 2
Flexibility	2.5 degrees @ -30°C	No cracking	No cracking
Impact resistance	-30°C	≥ 1.5 J	No holidays @ 1.5 J

Dimensional Properties as per BPPC™ Quality Plan

	Minimum Thickness	Nominal Thickness
FBE thickness for 65°C operating temperature	305 micrometers (12 mils)	356 micrometers (14 mils)
FBE thickness for 110°C operating temperature	508 micrometers (20 mils)	559 micrometers (22 mils)

Operating Properties

Maximum operating temperature	65°C wet, 110°C dry*
Minimum handling temperature	-40°C

* A temperature rating of 110°C is dependent on moisture, soil conditions, type of FBE powder and applied thickness.

Girth Weld Protection: Bayou Perma-Pipe Canada, Ltd. can supply liquid epoxies or heat shrinkable sleeves for completion of coating on field joint areas

Note: For contractual purposes, the most recent edition of CSA Z245.20 shall apply, plus additional written agreements between the Customer and Bayou Perma-Pipe Canada, Ltd.



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