

Ultrabond IISE

Three layer polyethylene external pipe coating system

ENERGY & MINING



Ultrabond IISE consists of a Fusion Bond Epoxy primer, followed by a polymeric adhesive and a high-density side extruded polyethylene outer jacket. It is ideally suited for extreme temperature and soil stress conditions and is easily applied to ERW and large diameter raised weld pipe.

Product Features

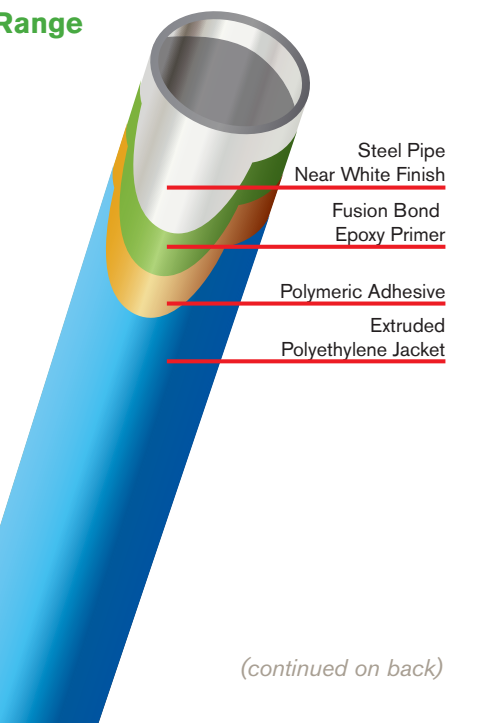
- Recommended for service conditions between -40°C and 85°C (also available in a 100°C version)
- Intended for use as an external coating for buried or submerged oil or gas pipelines
- Offers superior adhesion, cathodic disbondment resistance and mechanical protection
- Ideally suited for directional and/or bored crossings with the option of modifying each individual thickness layer to meet the most demanding requirements
- Exceptional for moist conditions and moderately rocky terrain
- Excellent corrosion, moisture and soil stress resistance

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 Z245.21-10 B1
ISO 9001:2008



(continued on back)

Typical Properties and Performance Characteristics

High Density Polyethylene Properties per CSA Z245.21-10

Property	Test Method	Requirement	Typical Values
Density	ASTM D1505	> 0.940 g/cm ³	0.949 g/cm ³
Elongation	ASTM D638	≥ 600%	650%
Tensile strength	ASTM D638	≥ 18.5 MPa	20 MPa
Hardness shore D	ASTM D2240	≥ 60	64

Coating Performance Characteristics per CSA Z245.21-10 System B1

Test	Conditions	Requirement	Typical Values
Peel adhesion	10mm/min @ 20°C	≥ 150 N	Average 350 N
Cathodic disbondment	28 days @ 20°C @ 1.5V	≤ 12mm radius	7mm radius
Cathodic disbondment	24 hours @ 65°C @ 3.5V	≤ 7mm radius	3mm radius
Flexibility	2.5 degrees @ -30°C	No cracking of PE	No cracking of PE
Impact resistance	-30°C	≥ 3.0 J/mm	5.0 J/mm
Gouge resistance	75 kilos @ -30°C with R33 Bit	Purchaser's specification	≤ 1.5mm depth No FBE exposed
Gouge resistance	50 kilos @ 20°C with R33 Bit	Purchaser's specification	≤ 1.5mm depth No FBE exposed
Outdoor exposure	N/A	N/A	≤ 2 years

Dimensional Properties

Property	Unit	Requirement	Typical Values
FBE primer thickness	mm (mils)	≥ 0.12 (5)	0.17 (7)
Adhesive thickness	mm (mils)	≥ 0.10 (4)	0.15 (6)
Polyethylene thickness	mm (mils)	≥ 1.00 (40)	1.20 (47)

Operating Properties

Maximum operating temperature	85°C*
Minimum handling temperature	-40°C

* Also available in a 100°C version.

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

Note: For contractual purposes, the most recent edition of CSA Z245.21 shall apply, plus additional written agreements between the Customer and Bayou Perma-Pipe Canada, Ltd.



BAYOU PERMA-PIPE CANADA

Coating Plant

5233 39th Street
Camrose, AB T4V 4R5
Tel: 780-672-2345
Fax: 780-672-3006

Sales Office

Suite 104, 221 18th St. SE
Calgary, AB T2E 6J5
Tel: 403-264-4880
Fax: 403-290-0055

www.bayoupermapipe.com