

Ultrabond RA

Two layer polyethylene external pipe coating system

ENERGY & MINING



Ultrabond RA consists of a high integrity rubberized asphalt adhesive applied to a heated, abrasively cleaned pipe followed by weather resistant extruded high density polyethylene. It was developed to provide superior pipeline protection for service conditions requiring moderate operating temperatures for pipe used in the oil, gas and waterworks industries.

Product Features

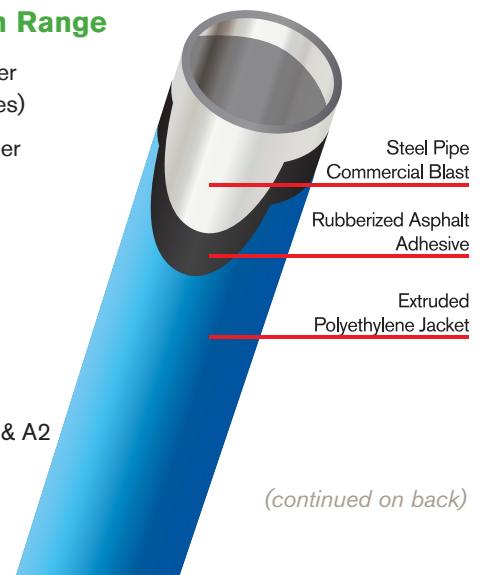
- Recommended for service conditions between -40°C and 60°C
- Flexible
- Multiple coat availability
- Corrosion, moisture and soil-resistant
- Offers excellent adhesion, cathodic disbondment resistance and mechanical protection

Pipe Application Range

- Minimum Pipe Diameter
 - 60.3mm (2.375 inches)
- Maximum Pipe Diameter
 - 508mm (20 inches)
- Minimum Pipe Length
 - 5.5m (18 feet)
- Maximum Pipe Length
 - 25m (82 feet)

Compliance

CSA Z245.21-10 A1 & A2
ISO 9001:2008



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Typical Properties and Performance Characteristics

Polyethylene Properties per CSA Z245.21-10

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

Coating Properties per CSA Z245.21-10 System A1 & A2

Test	Conditions	Requirement	Typical Values
Peel adhesion	10mm/min@ 20°C	≥ 3 N for System A1 ≥ 19.6 N for System A2	Average 30 N
Cathodic disbondment	28 days @ 20°C @ 1.5V	≤ 12mm radius	5mm radius
Cathodic disbondment	24 hours @ 65°C @ 3.5V	≤ 12mm radius	3mm radius
Flexibility	2.5 degrees @ -30 °C	No cracking of PE	No cracking
Impact resistance	-30°C	≥ 3.0 J/mm	5.0 J/mm
Outdoor exposure	N/A	N/A	≤ 2 years

Dimensional Properties

NPS	< 3	4	6	8	> 10
Adhesive thickness in mm (mils)	0.17 (7)	0.17 (7)	0.17 (7)	0.17 (7)	0.25 (10)
Polyethylene thickness in mm (mils)	0.70 (28)	0.75 (30)	0.90 (36)	1.02 (41)	1.27 (50)
Total in mm (mils)	0.87 (35)	0.92 (37)	1.07 (43)	1.19 (48)	1.52 (60)

Operating Properties

Maximum operating temperature	60°C
Minimum handling temperature	-40°C

Adhesive Properties per CSA Z245.21-10

Property	RA Adhesive
Softening Point (Ring & Ball) ASTM E28	≥ 80°C

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.



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