

HBE-FLX

High Build Epoxy coating for high flex applications

HBE-FLX is a two-component liquid epoxy coating system which offers 360° equivalent performance to single-layer fusion bond epoxy (FBE) coatings – matching flexibility criteria down to 0°C (32°F). HBE-FLX has been specifically formulated for high flex applications and is rated for pipeline operating temperatures up to 95°C (302°F). HBE-FLX is used for protection of linepipe, field joint girth welds, valves and fittings, as a holiday repair material or for rehabilitation projects. The coating is also well suited for directional drilling, thrust boring, rocky terrain, tank linings and other high flex applications. This environmentally friendly, 100% solids, epoxy system can either be spray applied or brush applied to the intended substrate.

High Flexibility

- HBE-FLX can attain flexibility properties of >3.0°ppd at 23°C (73°F) and >2.0°ppd at 0°C (32°F) without the use of urethane (isocyanate) chemistry

Matches FBE Linepipe Requirements

- HBE-FLX is compliant to CSA Z245.20-14 and ISO 21809-2:2014 test requirements from 95°C (302°F) down to 0°C (32°F)

Protection up to 95°C

- HBE-FLX coating system was designed to protect operating pipelines up to 95°C (302°F)

Directional Drill Compatibility

- High flexibility, tensile elongation, impact, gouge and abrasion resistance are all coating properties that are maximized for directional drilling suitability

High Build in Single Coat

- A single pass application direct-to-metal will achieve a high build coating thickness of 20-40 mils (500-1000 microns)



Applications



Directional Drilling



Oil & Gas



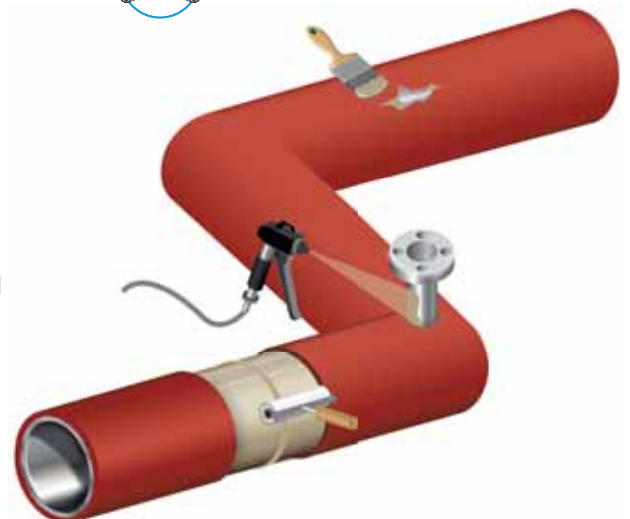
Girth-Weld Joints



Repair & Rehab



Fittings & Bends



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Coating Properties	Test Method	Typical Values
Service Temp.		Up to 95°C (203°F)
Typical Thickness		≥ 20 mils
Mixing Ratio (by volume)		3 parts base : 1 part cure
Percent Solids		100%
Specific Gravity (g/cc)		1.543 base, 1.076 cure
Hardness	ASTM D2240	85 Shore D
Pull-Off Adhesion to Steel	ASTM D4541	> 3400 psi
Pull-Off Adhesion to FBE	ASTM D4541	> 3300 psi
Cathodic Disbondment @ 28 days, 23°C	CSA-Z245.20-14, 12.8	2 mm
Cathodic Disbondment @ 28 days, 95°C	CSA-Z245.20-14, 12.8	8 mm
Impact Resistance @ 23°C	ISO 21809-3, Annex G	> 5 J/mm
Hot Water Immersion @ 28 days, 95°C	CSA-Z245.20-14, 12.14	Rating 1
Gouge Resistance @ 50 kg, 23°C	CSA-Z245.20-14, 12.15	< 20 mils depth
Abrasion Resistance Weight loss: 1000 cycles CS-17 1kg	ASTM D4060	0.110 grams
Flexibility @ 0°C	CSA-Z245.20-14, 12.11	> 2.0°/pd
Flexibility @ 23°C	CSA-Z245.20-14, 12.11	> 3.0°/pd
Shelf Life	3 years when stored in original packaging between 5°C (40°F) and 40°C (105°F).	
Cure Speed ¹	Test Method	Typical Values
Gel Time	ASTM D1640	20 minutes
Dry To Touch Time	ASTM D1640	2 hours 30 minutes
Hard Dry Time (Shore D > 70)	ASTM D2240	5 hours
Typical Kit Size Required by Pipe Diameter ²		
4" – 16"		0.5 Liter Kit
18" – 32"		1.0 Liter Kit
34" – 50"		1.5 Liter Kit

¹ Cure Times measured @ 23°C (73°F)

² Based on 400 mm coating width, 20 mils (508 micron) average thickness and 50% wastage factor

Safety

Handle with care. Before and during use, observe all safety labels on packaging containers, consult with Canusa-CPS Material Safety Data Sheets and abide by all local or national safety regulations.

Since 1967, Canusa-CPS has been a leading developer and manufacturer of specialty pipeline coatings for the sealing and corrosion protection of pipeline joints and other substrates. Canusa-CPS high performance products are manufactured to the highest quality standards and are available in a number of configurations to accommodate many specific project applications.

The product information shown here is intended as a guide for standard products.

Consult your Canusa representative for specific projects or unique applications.



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**Quality Management
system registered to
ISO 9001**

Canusa warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the product data sheet when used in compliance with Canusa's 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 therewith. Canusa's liability is stated in the standard terms and conditions of sale. Canusa makes no other warranty either expressed or implied. All information contained in this data sheet is to be used as a guide and is subject to change without notice. This data sheet supersedes all previous data sheets on this product. E&OE

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