

## TBK

### Advanced girth-weld protection for pipes used in directionally drilled applications

The TBK Directional Drilling system is specifically designed to protect welded joints on PE, FBE and HPCC coated pipelines in directional drilling applications. In addition to providing effective protection against pull-through forces that occur during the directional drilling operation, Canusa's TBK systems provide superior corrosion protection at pipeline weld joints. The product range includes TBK-65, TBK-80 and TBK-PE, which are each designed to meet specific application conditions and operating requirements.

#### Multi-Layers of Protection

- Force-cured liquid epoxy applied to steel, if required, for maximum corrosion protection
- Primary sleeve composed of high shear strength adhesive, a protective heat shrinkable backing, and a pre-attached closure patch
- Sacrificial sleeve incorporated to protect the leading edge of the underlying primary sleeve during pull-through operation
- Epoxy overcoat applied at the leading and trailing ends of the joint coating to provide additional protection to the system during directional drilling

#### Superior Gouge and Abrasion Resistance

- Designed to mitigate the effect of forces associated with directional drilling
- Highly resistant to the effect of soil stresses and pipe movements
- Canusa's ScarGuard®, WrapidShield XLE and HBE-DX products are provided as alternatives for added mechanical protection as an overcoat

#### Unique Adhesive Technology

- Allows for lower installation pre-heat temperatures and superior bonding to mainline coating
- Adhesive has been formulated to bond directly to the mainline coating; epoxy (if required) is applied to the steel only
- Lower pre-heat temperature means less time heating resulting in application time and cost



#### Applications



Oil & Gas



Water Pipelines



Directional Drilling



Girth-Weld Joints



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Sleeve Operating Characteristics		TBK-65*	TBK-80	TBK-PE
Pipeline Operating Temp.**		Up to 65°C (150°F)	Up to 80°C (176°F)	Up to 100°C (212°F)
Minimum Installation Temp.		90°C (195°F)	110°C (230°F)	130°C (266°F)
Mainline Coating Compatibility		FBE, PE, PP, HPCC	FBE, PE, HPCC	FBE, PE, HPCC
Adhesive Properties	Test Method	Typical Values		
Softening Point	ASTM E28	94°C	124°C	> 150°C
Lap Shear	EN 12068	245 N/cm <sup>2</sup>	365 N/cm <sup>2</sup>	> 500 N/cm <sup>2</sup>
Backing Properties				
Tensile Strength	ASTM D638	24 MPa	22 MPa	22 MPa
Elongation	ASTM D638	700%	600%	600%
Hardness	ASTM D2240	50 Shore D	> 55 Shore D	> 55 Shore D
Volume Resistivity	ASTM D257	10 <sup>17</sup> ohm-cm	10 <sup>17</sup> ohm-cm	10 <sup>17</sup> ohm-cm
Abrasion Resistance	ASTM D1044	35 mg	30 mg	30 mg
Specific Gravity	ASTM D792	0.93	0.94	0.94
Sleeve Properties				
Adhesive Strength @ 23°C	ISO 21809-3	> 70 N/cm	> 50 N/cm	> 200 N/cm
Impact Resistance	ISO 21809-3	5 J/mm	5 J/mm	7 J/mm
Indentation Resistance***	ISO 21809-3	> 0.6 mm (at 60°C)	> 1.0 mm (at 80°C)	> 2.5 mm (at 80°C)
Cathodic Disbondment @ 23°C, 28 days****	ISO 21809-3	3 mm rad	3 mm rad	3 mm rad
Low Temp. Flexibility	ASTM D2671-C	> -32°C	> -26°C	> -26°C

\* System can either be in 2-layer or 3-layer configuration

\*\* Actual temperature rating is dependant on specific project requirements and conditions.

\*\*\* Residual Thickness. Test performed on 2.6 mm standard thickness sleeve as supplied.

\*\*\*\* As a 3-layer system

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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