

## KOWRAP E60M

### Advanced 2 Layer Heat Shrinkable Sleeve for Corrosion Prevention

Kowrap E60M wrap-around heat shrinkable sleeves are designed for complete corrosion prevention system of the field joint onshore/offshore steel pipelines in various distribution and transmission networks for operating temperature up to 80°C. It is composed of cross-linked polymer backing and heat-sensitive viscoelastic sealant adhesive.

The installation is applied on a cleaned, pre-heated and dried pipe surface without any liquid adhesive being required. During application, Kowrap is wrapped tightly by allowing torch treatment to form shrinkage around a field joint. During the recovery stage, softened mastic adhesive flows to form a perfect bond with the pipe surface providing absolute protection against corrosion. The system's cross-linked polymer outer layer backing becomes high impact resistant against possible external stress and damage, and it also prevents moisture transmission resulting at the beginning of corrosion growth. The system is compatible with general pipe coating materials (PE, PP, FBE, PU, Coal Tar, Asphalt and etc.) which makes wide-range of use.



#### Proven Superior Performance

- Superior anti-corrosion and sealing performance
- Outstanding cathodic disbondment resistance
- Excellent hot water immersion resistance
- Great self-healing effect due to the nature of adhesive material and high shrinkage effect
- Fully resistant to shear forces against erosion and thermal movements

#### Field- Friendly Installation

- No liquid adhesive is needed
- Quick application time
- No heavy equipment is needed

#### Minimized Cost & Time Saving

- Supplied as bulk rolls or custom-cut to the required pipe size
- Eliminate unnecessary inventory
- Just-in-time pre-cut sleeve option available

#### Exceptional Aging Condition & Maintenance

- Easy handling without temperature sensitivity
- Insensitive to storage conditions and shelf life

#### Customized composition of backing and adhesive

- Engineered for different environments and stress/impact conditions

#### Application Area



Oil & Gas



Water



Onshore



Offshore

#### Operating Temperature



Up to 80°C

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### PRODUCT DATA SHEET

Sleeve Operating Characteristics		E60M	
Pipeline Operating Temp. (Offshore)		Up to 80°C (176°F) <sup>⌘</sup>	
Pipeline Operating Temp. (Onshore)		Up to 65°C (150°F) <sup>⌘</sup>	
Minimum Installation Temp.		75°C (167°F)	
Mainline Coating Compatibility		PE, PP, FBE, Coar Tar, Asphalt and etc.	
Adhesive Properties	Test Method	E60M	
Softening Point	ASTM E28	97°C	
Lap Shear @ 23°C	EN 12068	0.21 N/mm <sup>2</sup>	
Backing Properties	Test Method	E60M	
Tensile Strength	ASTM D638	>21 MPa	
Elongation	ASTM D638	>500%	
Hardness, Shore D	ASTM D2240	>52	
Water Absorption	ASTM D570	0.05%	
Sleeve Properties*	Test Method	E60M	
Peel Strength to Pipe Surface @ 23°C	EN 12068	>1.3 N/mm	
Impact Resistance	EN 12068	>15 J	
Indentation Resistance	EN 12068	>1.23 mm	
Cathodic Disbondment @ 23°C, 28 days	EN 12068	9 mm rad	
Low Temp. Flexibility	EN 12068	>-20°C	
Thickness	L	S	P
Backing (nominal thickness as supplied)	0.8 mm	1.0 mm	1.0 mm
Adhesive (nominal thickness as supplied)	0.8 mm	1.0 mm	1.5 mm

⌘ Actual temperature rating depends on project requirements and conditions.

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Innochem warrants that the product conforms to its chemical and physical description and its appropriate for the use stated on the technical data sheet when used in compliance with Innochem written instructions. Since many installation factors are beyond the control of Innochem, the user shall determine the suitability of the products for the intended use and assume all risks and liabilities in connection herewith. Innochem liability is stated in the standard terms and conditions of sale. Innochem makes no other warranty either expressed or implied. All information contained in this technical data sheet is to be used as a guide and is subject to change without notice. This technical data sheet supersedes all previous data sheets on this product.

