



INR-110 & K-60 Wrapid Sleeves™ for Insulated Pipes

Corrosion protection and sealing sleeves for pre-insulated pipe joints

For more than 45 years, 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.

Product Description

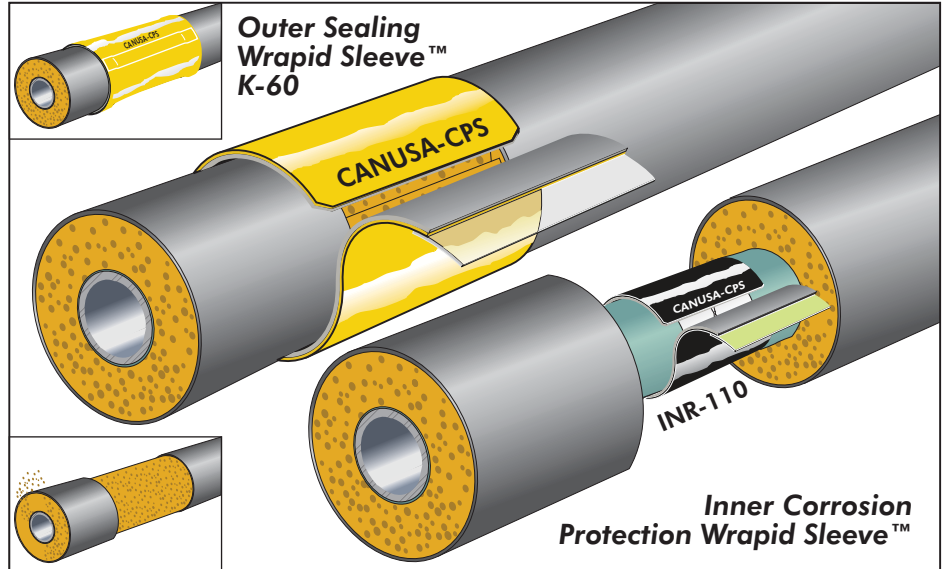
Canusa provides high performance, heat shrinkable products designed for the corrosion protection (INR-110) and sealing protection (K-60) of pre-insulated pipe joints.

INR-110 sleeves are specifically engineered for use in combination with polyurethane (PUR) foam or other infill systems. These sleeves are resistant to the conditions associated with the PUR foaming operation and maintain their full set of anti-corrosion properties. INR-110 sleeves are fully compatible with a wide range of pipeline coatings, including PP, FBE, PE, Coal Tar and Tape. The Canusa Wrapid Sleeve™ Type K-60 is a one-piece wraparound sleeve used to seal and provide mechanical protection of exposed foam insulation. It consists of a cross-linked polyolefin backing, coated with a technologically advanced protective adhesive which effectively bonds to polyethylene outer jackets and foam insulation.

Features & Benefits

Corrosion Protection INR-110 Sleeve

- I) Operator Friendliness - One-piece, wraparound sleeves with a factory bonded closures and a specially engineered product thickness results in optimum installation time. Single wrap configuration eliminates the requirements for multiple wrappings.
- II) Crosslinked Polyolefin Backing - Proprietary crosslinking technology provides superior resistance to PUR in-fill while ensuring long-term hoop stress.
- III) Unique adhesive technology allows for a low surface preparation requirement while ensuring long-term adhesion and excellent cathodic disbondment resistance properties.



Outer Sealing Sleeves-Type K-60

Long-Term Protection

Wrapid Sleeve™ Type K-60 provides excellent resistance to soil stress resulting in an effective long term seal. Once installed, Wrapid Sleeve™ Type K-60 provides the structural integrity of a seamless tube, and provides the substrate with durable protection against abrasion and chemical attack.

Saves Time & Money

With Wrapid Sleeve™ Type K-60's unique construction, less time is required handling, positioning and installing separate closures. With the application of heat, this feature allows for fast, simple and complete installation of the sleeve. This minimizes installation time and labour costs while promoting high production rates.

- I) Wrapid Sleeve™ Type K-60 Configuration - One-piece configuration (K) incorporates a pre-attached closure that has been factory applied resulting in quick and reliable field installation.
- II) Crosslinked Polyolefin Backing - Proprietary crosslinking technology provides superior abrasion resistance and mechanical strength to the backing.
- III) Assured Performance - Operating temperature specific adhesives ensure aggressive bonding and long-term sealing protection even in high soil stress conditions.
- IV) Job-site Flexibility - CanusaWrap™ (W) bulk rolls are available upon special request for varying pipe diameters.

Applications

- Pre-Insulated Pipes
- Infill Systems
- Girth-Weld Joints
- Jacket Continuation

Configurations

- Wrapid Sleeve™
- CanusaWrap™
- Standard Shrink

Pipe Sizes

- 55-1520mm (2-60")

Temperature Range



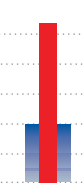

- up to 110°C (230°F)

INR-110 & K-60 Wrapid Sleeves™ for Insulated Pipes

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

Corrosion protection and sealing sleeves for pre-insulated pipe joints

Product Selection Guide

Sleeve Operating Characteristics	Choose your sleeve based on Operating Temperature and Characteristics listed below.		Corrosion Protection	Sealing Protection
	Celsius	Fahrenheit	INR-110	K-60*
 Pipeline Operating Temperature  Pre-heat Temperature	100°	212°		
	80°	176°		
	60°	140°		
	40°	104°		
	20°	68°		
	0°	32°	10°C (18°F) above Dew Point 110°C (230°F) not applicable excellent Bit, Tape, CTE, PE, PP, FBE St 2	65°C (149°F) 60°C (122°F) good not applicable Tape, PE, PP St 2
			Minimum Installation Temperature ¹ Maximum Operating Temperature Resistance to Soil Stress / Axial Movement Compatibility to Polyurethane Foam (In-fill) ² Main Line Coating Compatibility Recommended Surface Preparation	

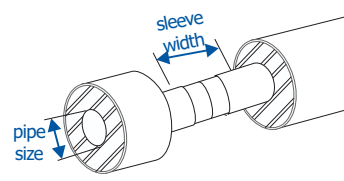
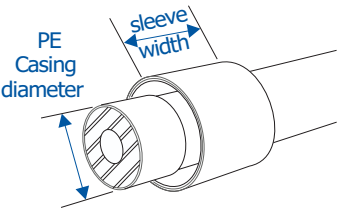
Typical Product Properties

¹ these preheat temperatures only apply to insulated pipelines, refer to Wrapid Sleeve™ Product Data Sheet for girth-weld corrosion protection
² product resists in-fill material (i.e. PUR foam) up to 240°C (464°F)

Adhesive	Test Standard	Unit	INR-110	K-60*
Softening Point	ASTM E28	°C (°F)	120 (248)	87 (189)
Lap Shear Strength	DIN 30 672	N/cm ² (psi)	6 (9)	35
Backing	Test Standard	Unit	INR-110	K-60*
Specific Gravity	ASTM D792		0.95	0.93
Tensile Strength	ASTM D638	MPa (psi)	22 (3190)	20
Elongation	ASTM D638	%	600	600
Hardness	ASTM D2240	Shore D	52	46
Heat Shock - 4 hrs @ 250°C	ASTM D2671	Visual	pass	pass
Abrasion Resistance	ASTM D1044	mg	30	45
Sleeve	Test Standard	Unit	INR-110	K-60*
Peel Strength	DIN 30 672	N/cm (pli)	18 (10)	88
Water Absorption	ASTM D570	%	0.05	0.05
Low Temperature Flexibility	ASTM D2671	°C (°F)	-30 (-22)	-20 (-4)
Resistance to PUR in-fill	--	Pass/Fail	Pass	N/A
Drum Skin Test	D024 A P50-F SD004	Visual	no melt or sag	N/A

How To Order:

*K-60 UV should be used for above ground applications

Dimensions & Ordering Info	INR-110 230-300 BK	Standard Corrosion Protection (INR-110) Sleeve Options	Diagram
	Colour ▶ Sleeve Width ▶ Pipe Size ▶ Maximum Operating Temperature ▶ Adhesive (thickness as supplied) ▶ Backing (thickness as supplied) ▶ Backing (thickness fully recovered) ▶ Application ▶	BK- Black 300, 450, 600 mm (12, 18, 24") 55 - 1220 mm (2 - 48") 110°C (230°F) 1.0 mm (40 mils) 0.63 mm (25mils) 0.80 mm (32mils)	
		Corrosion Protection of PUR Infill Systems	Min. Sleeve Width = Bare Steel Dimension + 50 mm (2") on each side of the pipe joint.
Dimensions & Ordering Info	K-60 315-600 BK	Standard Sealing Protection Sleeve Options	Diagram
	Colour ▶ Sleeve Width ▶ Jacket Diameter ▶ Adhesive (thickness as supplied) ▶ Backing (thickness as supplied) ▶ Application ▶	K-60 YE- Yellow 600, 900 mm (24, 36") 55 - 1520 mm (2 - 60") 1.1 mm (0.045") 0.6 mm (0.025")	
		Sealing Protection of PUR Infill Systems	Sleeves should overlap at least 50mm (2") onto the mainline coating

The above represent standard ordering options. Consult your Canusa representative for any unique project requirements or CanusaWrap™ (require CLW closures) configuration.



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Canusa-CPS Products

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