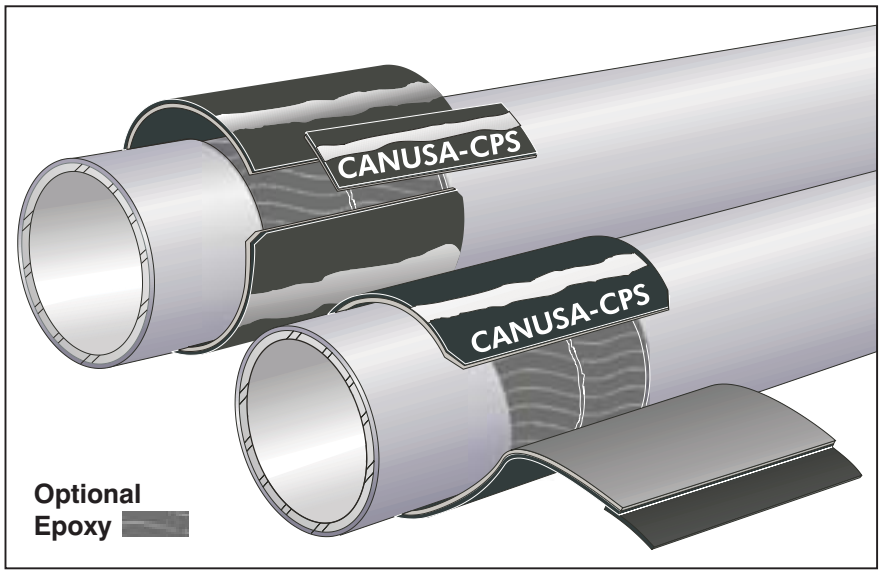
GTS-65

Girth-weld protection of elevated operating temperature pipelines

Canusa-CPS is a leading manufacturer of specialty pipeline coatings which, for over 35 years, have been used for sealing and corrosion protection of pipeline joints and other substrates. Canusa high performance products are manufactured to the highest quality standards and are available in a number of configurations to accommodate your specific project applications.



Product Description

The GTS-65 system provides superior corrosion protection and excellent bonding on pipelines operating up to 65°C. GTS-65 has been designed with a unique adhesive technology that remains "open" longer than traditional adhesives. Also, special surface active agents allow bonding to lower surface energy coatings (such as polypropylene). As a result, lower preheat temperatures are required to attain true adhesive wet-out and superior bonding to PE, PP and FBE surfaces is achieved.

Features & Benefits

Superior Force Cured Epoxy Method

Canusa's proven method of force curing the epoxy primer to the steel allows the installer to "pre-inspect" the joint prior to sleeve application. The epoxy will not be displaced during the aligning and shrinking stages of the sleeve installation. This provides the assurance that the pipe is fully protected. Canusa's epoxy primer can be applied to an even, nominal 150µm (6 mil) thickness for maximum corrosion protection.

Unique Adhesive Technology

Canusa's unique adhesive technology allows for lower installation pre-heat temperatures and superior bonding to PE, PP and FBE coatings. The adhesive has been formulated to bond directly to the main line coating; epoxy is applied to the steel only. The result is a superior bond to the substrate, easier application and significant cost savings.

Flexible Installation.

GTS-65 can be used as a 2-layer or 3-layer sleeve system at the same low pre-heat temperature. For added flexibility, CanusaWrap bulk rolls are also available. Consult your Canusa representative to review your specific project requirements.

Long Term Corrosion Protection.

GTS-65 Sleeves provide superior corrosion protection because of the high performance system approach. This combination provides a protective coating with the structural integrity of a seamless tube, providing excellent resistance to cathodic disbondment and excellent durability against abrasion and chemical attack. The result is effective, long term protection against corrosion.

Saves Time & Money.

Time is saved in three ways; lower pre-heat means less time heating; epoxy on the steel only, means less time applying the epoxy; and the pre-attached closure means less time handling, positioning and installing the sleeve. The overall system minimizes installation time and labour costs while promoting high production rates.

Applications

- Oil & Gas
- Offshore Pipelines
- Polypropylene

Configurations

- Wrapid Sleeve™
- CanusaWrap™
- 2-Layer
- 3-Layer

Pipe Sizes

55-3048 (2"-120")

Temperature Range

Up to 65°C (149°F)

Approvals

EN 12068, SNAM, Gazprom, TransCanada, Gaz de France

The product selection chart shown here is intended as a guide for standard products.
Consult your Canusa representative for specific projects or unique applications.
Below are typical values based on Heavy Duty (L-thickness) Sleeves.

GTS-65
Global Transmission Sleeve

Product Selection Guide

Choose your sleeve based on Operating Temperature and Characteristics listed below.

Sleeve Operating Characteristics

Celsius	Fahrenheit
200°	392°
175°	347°
125°	257°
100°	212°
75°	167°
50°	122°

	GTS-65
Pipeline Operating Temp. °C (°F)	**65 (150)**
Minimum Installation Temp. °C (°F)	**90 (195)**
Resistance to Circumferential Forces	**excellent**
Resistance to Soil Stress	**excellent**
Resistance to Axial Pipe Movement	**excellent**
Main Line Coating Compatibility	FBE, PE, HPCC, PP

Typical Product Properties

		Test Standard	Unit	GTS-65
Adhesive	Softening point	ASTM E28	°C (°F)	94 (201)
	Lap shear @ 23°C	EN 12068	N/cm^2	245
	Lap Shear @ 60°C	EN 12068	N/cm^2	8
Backing	Specific gravity	ASTM D792		0.93
	Tensile strength	ASTM D638	MPa (psi)	24 (3480)
	Elongation	ASTM D638	%	700
	Hardness	ASTM D2240	Shore D	50
	Abrasion resistance	ASTM D1044	mg	35
	Volume Resistivity	ASTM D257	ohm-cm	10^{17}
	Dielectric Voltage Brkdwn	ASTM D149	kV/mm	27
Sleeve	Impact	EN 12068	J	>15
	Indentation	EN 12068	mm	0.65 (pass)
	Peel Adhesion	ASTM D1000	N/cm (pli)	120 (70) **
	Peel Adhesion	EN 12068	N/cm	>100 **
	Cathodic Disbondment	ASTM G8	mm rad	3
	Water Absorption	ASTM D570	%	0.05
	Low Temp. Flexibility	ASTM D2671-C	°C (°F)	>-32 (-26)
	Fully Recovered **T** Thickness		mm (mils)	1.9 (77)
	Fully Recovered **L** Thickness		mm (mils)	2.4 (96)
	Fully Recovered **S** Thickness		mm (mils)	3.0 (121)

**force result of backing elongation during peeling due to superior bond strength

Epoxy Primer Information

GTS-65 (3-layer) require epoxy on the cut-back area and 10 mm (0.5") onto the adjacent pipe coating.

Epoxy Primer Kits
This kit includes measured quantities of base resin and cure, a stirring stick, applicator pad or roller and gloves. The kit contains sufficient primer for up to 1 square meter (10 sq. ft) of coverage. For example: 1 kit is sufficient for a 915mm (36") diameter pipe with a 300mm (12") total cutback.

Bulk Epoxy Primer
Bulk epoxy components must be ordered separately. The mixing ratio for the E primer is 4 parts base, 1 part cure by volume, and 6.3 parts base, 1 part cure by weight. Pumps are available to facilitate mixing operation. Average coverage for bulk primers is 20 square meters per U.S. gallon, (220 sq. ft / U.S. gallon).

Typical Primer Coverage
Joints per US gallon assuming 300mm (12") total cutback and 150µm (6mils) coating thickness

Pipe diameter mm	in	joints/ US gallon
170	6.6	130
230	8.6	97
280	10¾	78
315	12¾	70
400	16	60
450	18	55
500	20	43
610	24	35
760	30	28
915	36	23
1060	42	20
1220	48	18
1422	56	15
1525	60	14

Epoxy Properties

Pot life @ 23°C *(73°F)*	20 minutes
Typical epoxy coated thickness 100-150µm	(4 - 6 mils)
Shelf Life @ 23°C, when properly stored	3 years

How To Order[1]:

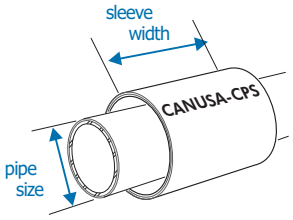
Dimensions & Ordering Info

GTS-65 900-450 BK/L

- Thickness ▸ T
- Colour ▸ L
- Sleeve Width ▸ BK
- Pipe Size ▸ 900
- Primer ▸ 450
- Adhesive (min. thickness as supplied) ▸ BK
- Backing (min. thickness as supplied) ▸ L
- Configuration ▸ /L

Ordering Options - Global Transmission Sleeve

T Thickness	L Thickness	S Thickness
T	L	S
BK-Black		
300, 450, 600, 900mm (12", 18", 24", 36")		
55-500mm (2"-20")	55 - 3048 mm (2" - 120")	
Canusa "E" Epoxy (Optional)		
1.1 mm (45 mils)	1.3 mm (50 mils)	1.6 mm (65 mils)
0.6 mm (25 mils)	0.9 mm (36 mils)	1.1 mm (43 mils)
GTS-65 - 65°C (149°F)		



Min. Sleeve Width =
Bare Steel Dimension + **50 mm** (2") on each side of the pipe joint.

The above represent standard Wrapid Sleeve™ ordering options. Consult your Canusa representative for any unique project requirements.
[1] For CanusaWrap™ bulk rolls, consult you Canusa representative. GTS-65 requires CLW closures.

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Canusa warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the installation guide 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 installation guide is to be used as a guide and is subject to change without notice. This installation guide supersedes all previous installation guides on this product. E&OE

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