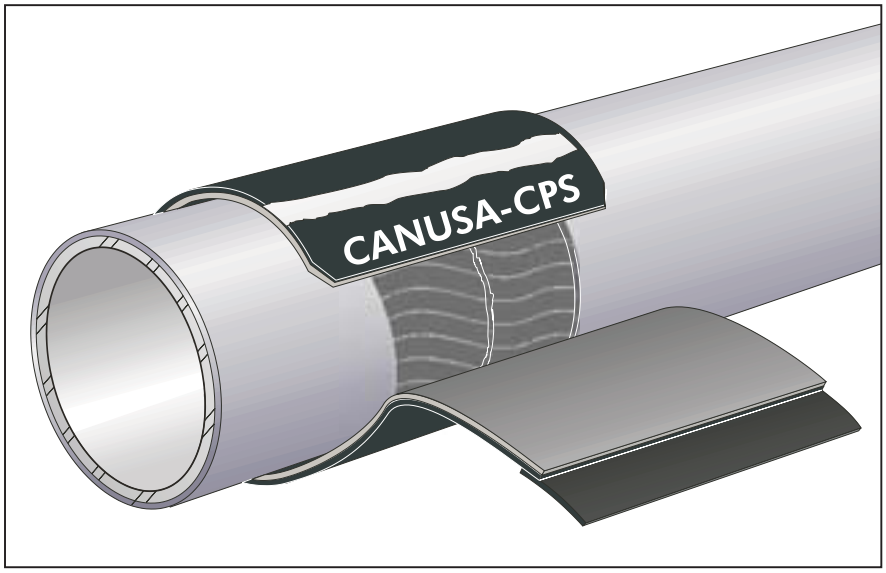
CANUSA-CPS
A SHAWCOR COMPANY

Product Data Sheet

GTS-PP-100 3-Layer

3-Layer High Performance Crosslinked Polypropylene Heat Shrink Sleeve System for the girth weld protection of 3-layer polypropylene coated pipelines

Canusa-CPS is a leading manufacturer of specialty pipeline coatings which, for over 30 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-PP-100 3-Layer*** system provides superior corrosion protection, resistance to soil stress and excellent bonding to polypropylene coated pipelines operating up to 100°C. ***GTS-PP-100 3-Layer*** has been designed with a unique crosslinked polypropylene backing and copolymer adhesive technology. Much lower installation preheats are required compared to other polypropylene based systems.

Key Product Advantages

- ***PP construction as required for elevated temperature pipelines,***
- ***Superior adhesive technology allows for direct bond to factory applied PP coating,***
- ***High performance materials allow for use under heated infill systems,***
- ***Highly responsive shrinkdown rates and one-piece sleeve design for fast and easy installation.***

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 thickness for maximum corrosion protection.

Unique Adhesive Technology

Canusa's unique adhesive technology allows for lower installation pre-heats and superior bonding to PP and PE 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.

Tough, Durable System

The polypropylene composition, including cross-linked polypropylene backing, of the ***GTS-PP-100 3-Layer*** provides in service properties comparable to the factory applied PP coating and vastly superior to all PE systems.

Saves Time & Money

The ***GTS-PP-100 3-Layer*** system saves time and money because it is installed by local labour using propane torches. The low installation pre heat requirement adds to the time savings.

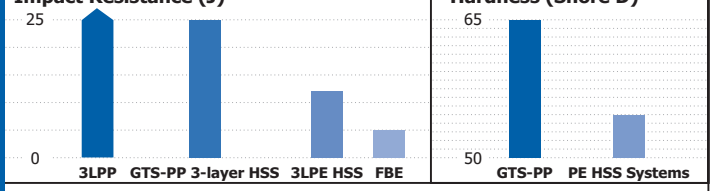
The product selection chart shown here is intended as a guide for standard products.
Consult your Canusa representative for specific projects or unique applications.

GTS-PP-100 3-Layer

Product Comparison Guide

Choose your sleeve based on characteristics listed below.

Sleeve Operating Characteristics



	GTS-PP-100 3-Layer
Maximum Operating Temperature °C (°F)	up to 100°C (212°F)
Minimum Installation Temperature °C (°F)	100 (212)
Resistance to Circumferential Forces	excellent
Resistance to Soil Stress	excellent
Resistance to Axial Pipe Movement	excellent
Main Line Coating Compatibility	PP

Epoxy Primer Information

GTS-PP-100 3Layer requires epoxy on the cut-back area only.

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 primer is 3 parts base, 1 part cure by volume, and 4.3 parts base, 1 part cure by weight. Pumps are available to facilitate mixing operation. Average coverage for bulk primers is 10 square meters per U.S. gallon, (110 sq. ft / U.S. gallon).

Epoxy Properties

Pot life @ 23°C *(73°F)*	12 minutes
Typical epoxy coated thickness	12 - 15 mils
Shelf Life @ 23°C, out of sunlight	3 years

Typical Primer Coverage

Joints per US gallon assuming 300mm (12") total cutback and 300µm (0.012") coating thickness

Pipe diameter mm	in	joints/ US gallon
170	6.6	65
230	8.6	43.5
280	10¾	39
315	12¾	35
400	16	30
450	18	27.5
500	20	21.5
610	24	17.5
760	30	14
915	36	11.5
1060	42	10
1220	48	9
1422	56	7.5
1525	60	7

Typical Product Properties

	Test Standard	Unit	GTS-PP-100 3Layer
Adhesive			
Softening point	ASTM E28	°C (°F)	> 125 (257)
Lap shear @ 23°C	ASTM D1002 (modified)	N/cm² (psi)	290 (200)
Backing			
Specific gravity	ASTM D792	--	0.93
Tensile strength	ASTM D638	MPa (psi)	28 (4000)
Elongation	ASTM D638	%	425
Hardness	ASTM D2240	Shore D	65
Volume Resistivity	ASTM D257	ohm-cm	2.0×10^{17}
Dielectric Voltage Brkdwn	ASTM D149	kV	25
Penetration Resistance @95°C, 24hrs	ASTM G-17	kV	No Holiday at 10kV
Sleeve			
Impact, 25kV after 30 drops	DIN 30 678	–	pass, no breakdown (> 25 J)
Peel @ 23°C	DIN 30672	N/cm (pli)	> 100 (60)
Cathodic Disbondment @ 23°C, 30 days	ASTM G8	mm rad	< 3
Cathodic Disbondment @ 95°C, 48 hours	ASTM G42	mm rad	< 6
Water Absorption	ASTM D570	%	0.05
Moisture Vapour Transmission @38°C, 90%RH	ASTM E-398	gm/24hr/100 sq. in.	< 0.05 gm/24hr/100 sq. in.
Hot Water Immersion Resistance, 95°C, 120days	ASTM D870	–	no blister or delamination, no water under sleeves

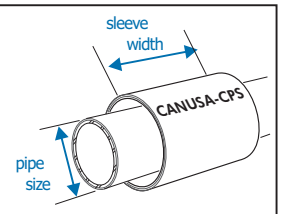
How To Order[1]:

Dimensions & Ordering Info

GTS-PP-100 3L 810-450 BK/T WS

- **Thickness** ▸
- **Colour** ▸
- **Sleeve Width** ▸
- **Pipe Size** ▸
- **Primer** ▸
- **Adhesive** (min. thickness as supplied) ▸
- **Backing** (min. thickness as supplied) ▸
- **Configuration** ▸

Ordering Options - Global Transmission Sleeve		
	L Thickness	S Thickness
Thickness	**L**	**S**
Colour	**BK**-Black	
Sleeve Width	**450mm (18"), other widths available upon request**	
Pipe Size	**55 - 1525 mm (2" - 60")**	
Primer	Canusa E-Epoxy Primer	
Adhesive (min. thickness as supplied)	**1 mm (40 mils)**	**1.5 mm (60 mils)**
Backing (min. thickness as supplied)	**1 mm (40 mils)**	**1.0 mm (40mils)**
Configuration	**GTS-PP-100 3Layer**	



Minimum 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.

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