

PPS120-OS Wrap-around Girth Weld Sleeve



The PPS120-OS is a 3-component field-joint coating system for high temperature, polypropylene coated offshore pipelines with Marine Mastic or PU infill, operating at up to 121°C (250°F) temperature

Product description

PPS120-OS

Construction: Three-component system:

First component: High shear strength copolymer adhesive layer.

Second component: Thick, radiation cross-linked polyethylene layer with PCI (Permanent Change Indicator)

Third component: High Temperature Adhesive Strips.

PPS120-OS with PCI is a wrap-around, heat-shrinkable sleeve designed for corrosion prevention and sealing of girthweld joints on high temperature, polypropylene coated offshore piping systems with Marine Mastic or PU infill, which operate at temperatures up to 121°C (250°F). The system is designed to be applied with special and user-friendly preheating methods. While installing, PPS120-OS with PCI is wrapped around the joint, a closure patch is then installed (already pre-attached if Uni-sleeve) forming a tube, and the sleeve is shrunk in place. Using installation components provided with the PPS120-OS.

Product features/benefits

- **Dimpled backing provides a “permanent change” indicator for application of heat.**
Ensures correct application heat & allows easy post-heat inspection. Reliable inspectability at any time.
- **Available as a one-piece wrap-around unit or in roll form.**
Saves money by keeping inventory and logistics costs low.
- **Specially designed application tools usable for all diameters.**
Makes installation fast and easy. Keeps installation costs low.
- **High shear resistance.**
Provides high functional performance and safety.
- **High operating temperature rating.**
Top performance in demanding conditions.

Product selection guide

	PPS120-OS
Max operating temperature	121°C (250°F)
Compatible line coatings	Polypropylene
Min preheat temperature	200-210°C (392-410°F)
Recommended pipe preparation	SA 2 1/2 or ST3

Product thickness

	PPS120-OS/B	PPS120-OS/1.2-1.2
Backing (as supplied)	0.030 in. (0.75 mm)	0.035 in. (0.9 mm)
Backing (fully free recovered)	0.039 in. (1.0 mm)	0.047 in. (1.2 mm)
Adhesive (as supplied)	0.039 in. (1.0 mm)	0.047 in. (1.2 mm)

Product properties: PPS120-OS (1)

Property	Test method	Typical Value
Backing		
Tensile strength	ASTM D-638	2700 psi @ 23°C (73°F) 660 psi @ 120°C (248°F)
Elongation	ASTM D-638	580% @ 23°C (73°F) 560% @ 120°C (248°F)
Hardness, Shore D	ASTM D-2240	57
Shrink force	ASTM D-638	40 psi
	150°C (302°F)	
Dielectric strength	ASTM D-149	800 volts/mil 31.5 kV/mm
Moisture absorption	ASTM D-570	0.06%
Adhesive		
Softening point	ASTM E-28	175°C (347°F)
Lap shear	ASTM D-1002	1300 psi @ 23°C (73°F) 100 psi @ 120°C (248°F)
Shear resistance	EN 12068 10 mm/min.	765 N/cm ² @ 23°C (73°F) 100 N/cm ² @ 120°C (248°F)

Product properties: PPS120-OS (2)

Property	Test method	Typical Value Property
Sleeve		
Peel to Steel	ASTM D-1000	30 lbs/in.width
Peel to Steel	EN12068	103 N/cm @ 23°C (73°F)
	10 mm/min.	7 N/cm @ 120°C (248°F)
Cathodic disbondment	ASTM G-42, 30 days	10 mm radius @ 120°C (248°F)
Soil stress creep resistance	TP-206, @ 120°C (248°F), 24 hrs	0.002 inches (0.051 mm)
Impact resistance	ASTM G-14	90 in-lbs
Impact resistance	EN 12068	Pass 8 Nm
Penetration resistance	ASTM G-17	no holiday with 12 kV detector @ 120°C (248°F)
Hot water immersion	ASTM D-870, @90°C (194°F), 120 days	no delamination, no blisters or water under sleeves

Ordering information

PPS120-OS type products are available as a total System. The system includes the PPS 120 Sleeves, System accessories and Installation Accessories. The PPS 120 Sleeves are ordered:

- as cut piece (pre-cut sleeve and separate closure patch)
- as Uni-sleeve (pre-cut sleeve with pre-attached closure patch)
- as a roll (closure patches to be ordered separately)

System accessories

- S1113-50X1X30000 mastic strip onto PP line coating to be ordered separately

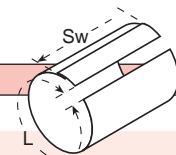
Installation accessories

- EQ-HEAT-SHIELD-150X3X25M to protect the PP line coating while preheating the steel area
- EQ-PP-PROTECT-150X0.25X30M to wrap around the PP line coating while preheating steel area to 200°C (392°F) to prevent the glass fiber heat shield to stick into the PP line coating.

Select sleeve width that will overlap onto the mill-applied coating by 2 inches (50 mm) or 3 inches (76 mm) minimum on each side of the weld joint. Take a 15% width shrinkage during installation of sleeve into account when calculating the minimum sleeve width.

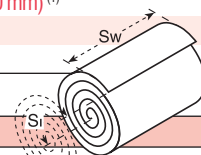
* Cut piece / Uni-sleeve, ⁽¹⁾ Nominal width

Example: PPS120-10750X17/B/UNI		Standard Ordering options
PPS120	Product type	PPS120
10750	Outside pipe diameter in mils	2.375" – 48.000" (DN50 – DN 1200)
17	Sleeve width in inches (Sw)	11" (285 mm) ⁽¹⁾ , 17"(450 mm) ⁽¹⁾ , 24" (600 mm) ⁽¹⁾ , 34" (870 mm) ⁽¹⁾
B	Thickness code	B
/UNI	Designates pre-attached closure patch	optional



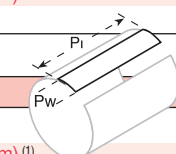
* Roll form (closure patches to be ordered separately), ⁽¹⁾ Nominal width

Example: PPS120-17x100/B-RL		Standard Ordering options
PPS120	Product type	PPS120
17	Roll width in inches	11" (285 mm) ⁽¹⁾ , 17"(450 mm) ⁽¹⁾ , 24" (600 mm) ⁽¹⁾ , 34" (870 mm) ⁽¹⁾
100	Roll length in feet	100 ft (30 m)



* Closure patch, ⁽¹⁾ Nominal width

Example: WPCP-IV-4X17		Standard Ordering options
4	Closure patch width in inches (Pw)	4" (100 mm), 6" (150 mm)
17	Closure patch length in inches (Pl)	11" (285 mm) ⁽¹⁾ , 17"(450 mm) ⁽¹⁾ , 24" (600 mm) ⁽¹⁾ , 34" (870 mm) ⁽¹⁾



Sleeve cut lengths and appropriate closure patch widths depend on the pipe size and product construction, see application table AT-GIRTHWELD.

PPS120-OS-REV6-JAN11 - LEXPS-0077



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Local Distributor / Representative:

For contact details of local Distributors / Representatives
Please visit www.berrycpg.com.

Headquarters
Franklin, MA, USA
Tel: +1 508 918 1714
US Toll Free: +1 800 248 0149
Fax: +1 508 918 1910
CPG@berryplastics.com

Houston, TX, USA
Tel: +1 713 676 0085
US Toll Free: +1 888 676 7202
Fax: +1 713 676 0086
CPGH@berryplastics.com

Tijuana, Mexico
Tel USA +1 858 633 9797
Fax US: +1 858 633 9740
Tel Mexico: +52 664 647 4397
Fax Mexico: +52 664 607 9105
CPGTJ@berryplastics.com

Westerlo, Belgium
Tel. +32 14 722500
Fax +32 14 722570
CPGE@berryplastics.com

Baroda, India
Tel: +91 2667 264721
Fax: +91 2667 264724
CPGIN@berryplastics.com