



The PPS120 with *PCI* (Permanent Change Indicator) is a 4-component field-joint coating system for high temperature, polypropylene coated pipelines operating up to 121°C (250°F) temperature.

## Product description

### PPS120 field-joint coating.

**Construction:** Four-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.

**Fourth component:** End seals composed of a two-component liquid epoxy with fiberglass reinforcement.

PPS120 is a wrap-around, heat-shrinkable sleeve designed for corrosion prevention and sealing on high temperature, polypropylene coated piping systems, which operate at temperatures up to 121°C (250°F). PPS120 is specially suited for higher stress conditions caused both by elevated temperatures and by soils with severe contraction between wet-dry cycles. PPS120 is normally used for girth weld protection of steel pipes coated with polypropylene. PPS120 may be cut to appropriate length to cover all pipe diameters. The system is designed to be applied with special and user-friendly preheating methods.

While installing, PPS120 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 special installation components provided with the PPS120, a two-component liquid epoxy is applied over the ends of the PPS120 and adjacent polypropylene coating in order to form the ultimate soil stress resistant high temperature girth weld protection. (See installation instruction for more detail)

## Product features/benefits

- **Dimpled backing provides a “Permanent Change Indicator” (PCI) 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. Saves money.
- **High shear resistance**  
Provides high functional performance and safety.
- **High operating temperature rating**  
Top performance in demanding conditions.

## Product selection guide

	PPS120
<b>Max operating temperature</b>	121°C (250°F)
<b>Compatible line coatings</b>	Polypropylene
<b>Min preheat temperature</b>	200-210°C (392-410°F)
<b>Recommended pipe preparation</b>	SA 2½
<b>Soil stress restrictions</b>	None

## Product thickness

	PPS120 (B)
Backing (as supplied)	0.030 in. (0.75 mm)
Backing (fully free recovered)	0.039 in. (1.0 mm)
Adhesive (as supplied)	0.039 in. (1.0 mm)

## Product properties: PPS120 (1)

Property	Test method	Typical Value
<b>Backing</b>		
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
Dielectric strength	ASTM D-149	800 volts/mil 31.5 kV/mm
Moisture absorption	ASTM D-570	0.06%
<b>Adhesive</b>		
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	EN12068	765 N/cm <sup>2</sup> @23°C (73°F) 100 N/cm <sup>2</sup> @120°C (248°F)

## Product properties: PPS120 (2)

Property	Test method	Typical Value Property
<b>Sleeve</b>		
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	EN12068	pass 8 Nm
Hot water immersion	ASTM D-870, @90°C (194°F), 120 days	no delamination, no blisters or water under sleeves
Penetration resistance	ASTM G-17	no holiday with 12 kV detector @ 120°C (248°F)

## Ordering information

PPS120 type products are available as a total System. The system includes the Sleeves, System accessories and Installation Accessories.

The 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

- 2X S1113-40X1X30000 mastic strip onto PP line coating (for min 3" overlap onto the PP line coating)
- S1113-50X1X30000 mastic strip onto PP line coating (for min 2" overlap onto the PP line coating)
- S1401-EPOXY-BRUSH (0.5 L kits) 2-component epoxy onto installed sleeve edges
- FIBERMAT-100X100M woven mat to be laminated between the 2 epoxy layers

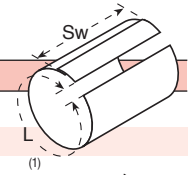
- EQ-HEAT-SHIELD-150X3X25M to protect the PP line coating while preheating the steel area
- EQ-PP-PROTECT-150X0.25X30M to wrap around the PP line coating while preheating steel area to prevent the glass fiber heat shield to stick into the PP line coating

Installation accessories

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 10% shrinkage during installation of sleeve width into account when calculating the minimum sleeve width.

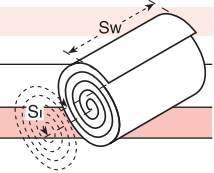
\* Cut piece / Uni-sleeve, <sup>(1)</sup> Nominal width

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)	17" (450 mm) <sup>(1)</sup> , 20" (514 mm) <sup>(1)</sup> , 24" (600 mm) <sup>(1)</sup>
B	Thickness code	B
/UNI	Designates pre-attached closure patch	optional



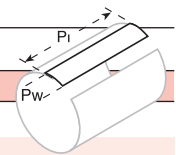
\* Roll form (closure patches to be ordered separately), <sup>(1)</sup> Nominal width

Example: PPS120-17x100/B-RL		Standard Ordering options
PPS120	Product type	PPS120
17	Roll width in inches (Sw)	17" (450 mm) <sup>(1)</sup> , 20" (514 mm) <sup>(1)</sup> , 24" (600 mm) <sup>(1)</sup>
100	Roll length in feet (Sl)	100 ft (30 m)



\* Closure patch, <sup>(1)</sup> 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)	17" (450 mm) <sup>(1)</sup> , 20" (514 mm) <sup>(1)</sup> , 24" (600 mm) <sup>(1)</sup>



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

Berry Plastics warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the technical data sheet when used in compliance with Berry Plastics written instructions. Since many installation factors are beyond the control of Berry Plastics, the user shall determine the suitability of the products for the intended use and assume all risks and liabilities in connection herewith. Berry Plastics liability is stated in the standard terms and conditions of sale. Berry Plastics 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.

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