

WPCZ Heated Infill Wrap-around Girth Weld Sleeve

The WPCZ is a two -layer field-joint coating system under heated infill systems in offshore networks.



Product description

WPCZ offshore joint coating.

Construction: Two-layer system:

First layer: Visco-elastic sealant adhesive.

Second layer: Thin-walled, radiation cross-linked, high density polyethylene with **PCI** (Permanent Change Indicator)

WPCZ is a heat-shrinkable wrap-around sleeve specially engineered for use on offshore, weight-coated pipelines incorporating hot marine mastic pour or other infill systems at the girth weld. WPCZ tolerates the pouring of this very hot and heavy mastic without losing any of its corrosion prevention ability. WPCZ is a very thin two-layer system, which has a fast shrink response.

WPCZ is used on various types of piping systems, including oil, gas, water, and pipe-type cable.

During installation, snugly wrap the sleeve centrally around the joint area, heat and apply the closure patch and continue to heatshrink (125°C (257°F)) the sleeve from its supplied size to fit tightly around the joint. Heat is applied from the center outwards and using standard propane torches. As the sleeve shrinks, the mastic flows and thoroughly coats the pipe surface providing protection against corrosion.

Product features/benefits

- **Combination of a one piece sleeve & fast shrink response**
Allows rapid and reliable installation under lay barge conditions.
- **3x faster than for cold applied tape systems!**
Saves installation time, thus saves money.
- **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.
- **Low preheat sensitivity & proven functionality**
Installation friendly in combination with high functional performance.
- **Highly flexible with mechanical strength**
Remains user-friendly even at low temperatures.
- **Available as all-in-one unit or roll form**
Saves money by keeping inventory and logistics costs low.
- **No special equipment or skills required**
Makes installation fast, easy and low cost.

Product selection guide

	WPCZ
Max operating temperature	60°C (140°F) under infill
Compatible line coatings	PE, PP, FBE, Coal Tar, Tape & Asphalt
Min preheat temperature	60°C (140°F)
Recommended pipe preparation	ST2½ - ST3 or SA 2½

Product thickness

	WPCZ
Backing (as supplied)	0.022 in. (0.55 mm)
Backing (fully free recovered)	0.030 in. (0.76 mm)
Adhesive (as supplied)	0.040 in. (1.0 mm)

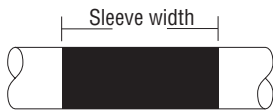
Product properties: WPCZ

Property	Test method	Typical Value WPCZ
Backing		
Tensile strength	ASTM D-638	3400 psi (23.5 MPa)
Elongation	ASTM D-638	600%
Hardness, Shore D	ASTM D-2240	55
Shrink force	ASTM D-638, 150°C (302°F)	40 psi
Dielectric strength	ASTM D-149	900 volts/mil (35 KV/mm)
Heat shock	ASTM D-2671	no visual cracking, flowing or dripping @ 225°C (437°F) for 4 hrs
Water absorption	ASTM D-570	0.05%
Adhesive		
Softening point	ASTM E-28	90°C (194°F)
Lap shear	ASTM D-1002 EN 12068 @ 10 mm (0.4")/min.	35 psi @ 23°C (73°F) 22 N/cm ²
Sleeve		
Peel to Steel	ASTM D-1000 EN 12068 @ 10 mm (0.4")/min.	14 lbs/in. width 1.6 N/mm
Cathodic disbondment	ASTM G-8, 30 days	13 mm radius
Low temperature flexibility	ASTM D-2671-C	-10°C (14°F)
Drum skin test	D024 A P50-F SD004	no melt, sag or drip @ 220°C (428°F) for 10 min.
Impact resistance	ASTM G-14	33 in-lbs
Penetration resistance	ASTM G-17	no holiday with 10 kV detector
Resistance to Hot Marine Mastic Pour		
Visual	pipe 24", mold 26", mastic @ 200°C (392°F)	no visible defects, no holidays @ 10 kV
Change in Peel	ASTM D-1000	< 15%
Change in Tensile strength	ASTM D-638	< 15%
Change in Elongation	ASTM D-638	< 15%

Ordering information

WPCZ type product is available:

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



Select sleeve width that will overlap onto the mill-applied coating by 2 inches (50 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

Example: WPCZ-10750X17/UNI

* Roll form (closure patches to be ordered separately)

		Standard Ordering options
10750	Outside pipe diameter in mils	3.500" – 48.000" (DN80 – DN 1200) ⁽¹⁾
17	Sleeve width in inches (Sw)	11" (11.25 or 285 mm) ⁽¹⁾ , 17" (17.75 or 450 mm) ⁽¹⁾ 24" (23.5 or 600 mm) ⁽¹⁾ , 34" (34.25 or 870 mm) ⁽¹⁾
/UNI	Designates pre-attached closure patch	optional

⁽¹⁾ Nominal width

Example: WPCZ-17x100-RL

* Closure patch

		Standard Ordering options
17	Roll width in inches (Sw)	11" (11.25 or 285 mm) ⁽¹⁾ , 17" (17.75 or 450 mm) ⁽¹⁾ 24" (23.5 or 600 mm) ⁽¹⁾ , 34" (34.25 or 870 mm) ⁽¹⁾
100	Roll length in feet (Sl)	100 ft (= 30 m)

⁽¹⁾ Nominal width

Example: WPCP-IV-4X17

4	Closure patch width in inches (Pw)	4" (100 mm), 6" (150 mm), 8" (200 mm)
17	Closure patch length in inches (Pl)	11" (11.25 or 285 mm) ⁽¹⁾ , 17" (17.75 or 450 mm) ⁽¹⁾ 24" (23.5 or 600 mm) ⁽¹⁾ , 34" (34.25 or 870 mm) ⁽¹⁾

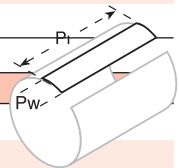
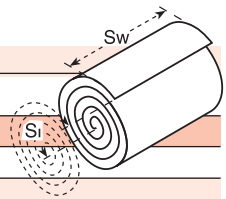
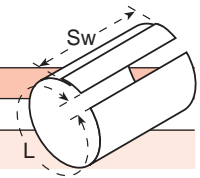
⁽¹⁾ Nominal width

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

For proper product installation, see latest installation instruction.

Minimum temperature for handling and application : -10°C (14°F)

Maximum temperature for handling and application : +40°C (104°F)



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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@berrypastics.com

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

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

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