



WPC is a two-layer field-joint coating system designed for corrosion protection of pipelines operating at ambient temperature.

Product description

WPC field-joint coating.

Construction: two-layer system:

First layer: Visco-elastic low preheat sealant adhesive.

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

WPC is a wraparound heat-shrinkable, ready-to-fit assembly for the corrosion protection of field girth weld joints in distribution and transmission systems.

WPC is compatible with standard pipe coatings. WPC can also be used for coating bare, replacement pipe sections and large radius bends. The system is designed to be applied with minimum preheating and is ideal for large diameter water pipe.

The installation is carried out directly on the cleaned and dried (pre-heated) pipe surface without any primer being required. During installation, the heat-shrinkable sleeve is wrapped and shrunk to form a tight fit around the joint. During recovery, the adhesive softens and flows to form a perfect bond with the pipe surface providing protection against corrosion. The radiation cross-linked outer layer forms a tough barrier against mechanical damage and moisture transmission.

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.
- Low preheat sensitivity & proven functionality**
 Installation friendly in combination with high functional performance.
- High impact and penetration resistance**
 Tough, but flexible even at low temperatures!
- Available as all-in-one unit or roll form**
 Saves money by keeping inventory and logistics costs low.
- Sealing adhesive automatically flows and repairs minor mechanical damages**
 Self-healing effect. Saves extra intervention steps.
- No special equipment or skills required**
 Makes installation fast and easy. Keeps installation costs low.

Product selection guide

	WPC
Max operating temperature	40°C (104°F) **
Compatible line coatings	PE, FBE, PP, Coal Tar, Tape & Asphalt
Min preheat temperature	60°C (140°F)
Recommended pipe preparation	ST 2 ^{1/2} - ST3 or SA 2 ^{1/2}
Soil stress restrictions	moderate
Performance	EN12068 Class B30 for T and /B construction Class C30 for /C and /D construction

** For pipe diameters ≤ 16" (DN400): 45°C (113°F)

Product thickness

	WPCT	WPC/B	WPC/C = WPC-C30E	WPC/D
Backing (as supplied)	0.022 in. (0.55 mm)	0.030 in. (0.76 mm)	0.040 in. (1.0 mm)	0.060 in. (1.5 mm)
Backing (fully free recovered)	0.030 in. (0.76 mm)	0.040 in. (1.0 mm)	0.055 in. (1.4 mm)	0.080 in. (2.0 mm)
Adhesive (as supplied)	0.055 in. (1.4 mm)	0.060 in. (1.5 mm)	0.060 in. (1.5 mm)	0.040 in. (1.0 mm)

Product properties: WPC (1)

Property	Test Method	Typical Value
Backing		
Tensile strength	ASTM D-638	3300 psi (22.8 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)
Water absorption	ISO 62	0.05%
Adhesive		
Softening point	ASTM E-28	90°C (194°F)
Lap shear	ASTM D-1002 EN12068 @ 10 mm (0.4")/min.	35 psi 22 N/cm ²

Product properties: WPC (2)

Property	Test Method	Typical Value
Sleeve		
Peel to Steel	ASTM D-1000 EN12068 @ 10 mm (0.4")/min.	14 lbs/in.width 1.6 N/mm
Cathodic disbondment	EN12068, 30 days	8 mm radius
Impact resistance	ASTM G-14 EN12068	35 in-lbs T&B : > 8 Nm /C & /D : > 15Nm
Penetration resistance	ASTM G-17 EN12068 class B30 class C30	no holiday with 10 kV detector T&B : > 1 N/mm ² /C & /D : > 10 N/mm ²

Ordering information

WPC type products are available:

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



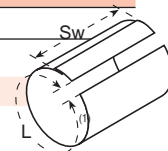
Select sleeve width that will overlap onto the mill-applied coating by 2 inches (50 mm) minimum on each side of the weld joint. When calculating the minimum sleeve width take for WPC/B a 10% shrinkage during installation of sleeve width into account and for WPC/C & WPC/D take a 18% shrinkage during installation of sleeve width into account.

* Cut piece / Uni-sleeve

Example: WPC-10750x17/D/UNI

⁽²⁾ Nominal width

WPC	Product type	Standard Ordering options
10750	Outside pipe diameter in mils	WPCT, WPC/B, WPC/C, WPC/D, WPC-C30-E 2.375" – 68.000" (DN50 – DN 1700)
17	Sleeve width in inches	11" (11.25 or 285 mm) , 17" (17.75 or 450 mm) ⁽¹⁾ 24" (23.5 or 600 mm) , 34" (34.25 or 870 mm) ⁽¹⁾
/D	Product construction	T, /B, /C, /D
/UNI	Designates pre-attached closure patch	optional

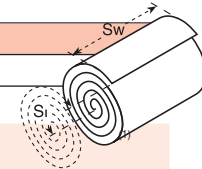


* Roll form (closure patches to be ordered separately)

Example: WPCT-17x100-RL

⁽²⁾ Nominal width

WPC...	Product type	Standard Ordering options
17	Roll width in inches	WPCT, WPC/B, WPC/C, WPC/D, WPC-C30-E 11" (11.25 or 285 mm) , 17" (17.75 or 450 mm) ⁽¹⁾ 24" (23.5 or 600 mm) , 34" (34.25 or 870 mm) ⁽¹⁾
100	Roll length in feet	100 ft (= 30 m), 66 ft (= 20 m, for /C and /D width 34" (870 mm) only)

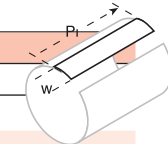


* Closure patch

Example: WPCP-IV-4x17

⁽²⁾ Nominal width

WPCP-IV-4x17	Product type	Standard Ordering options
4	Closure patch length in inches	4" (100 mm), 6" (150 mm), 8" (200 mm)
17	Closure patch width in inches	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⁾



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



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