

WPC ambient wrap-around Girth Weld Sleeve

The WPC ambient with is a two-layer field-joint coating system for pipeline operating at ambient temperature.



Product description

WPCT, WPC/B, WPC-C30 field-joint coatings.

Construction: Two-layer system:

First layer: Visco-elastic low preheat sealant adhesive.

Second layer: Radiation cross-linked, high density polyethylene with PCI (Permanent Change Indicator)

WPC ambient is a wrap-around heat-shrinkable, ready-to-fit assembly for the corrosion protection of field girth weld joints in distribution and transmission networks, for use especially in low shear or low stress environments and in moderate climates. (Above pipe diameter DN500 (20") in high shear and high stress environments, the use of WPC-C50,

HTLP60 is recommended or contact a Covalence CPG representative).

WPC ambient is compatible with standard pipe coatings. WPC ambient can also be used for coating bars, replacement pipe sections and large radius bends. The system is designed to be applied with minimum preheating of the pipe.

The installation is carried out directly on the cleaned and pre-heated pipe surface without any primer being required. During installation, the heat-shrinkable sleeve is wrapped around 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

- **Delayed beaking 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 flexibility**
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

	WPCT	WPC/B	WPC-C30
Max operating temperature	40°C (104°F) **	40°C (104°F) **	30°C (86°F)
Compatible line coatings	PE, FBE, Coal Tar, Tape & Asphalt	PE, FBE, Coal Tar, Tape & Asphalt	PE, FBE, Coal Tar, Tape & Asphalt
Min preheat temperature	60°C (140°F)	60°C (140°F)	60°C (140°F)
Recommended pipe preparation	ST2½ - ST3 or SA 2½	ST2½ - ST3 or SA 2½	ST2½ - ST3 or SA 2½
Self stress restrictions	Moderate	Moderate	Moderate
Performance	EN 12068 class B30	EN 12068 class B30	EN 12068 class C30

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

Product thickness

	WPCT	WPC/B	WPC-C30
Backing (as supplied)	0.022 in. (0.55 mm)	0.030 in. (0.76 mm)	0.040 in. (1.0 mm)
Backing (fully free recovered)	0.030 in. (0.76 mm)	0.040 in. (1.0 mm)	0.055 in. (1.4 mm)
Mastic sealant (as supplied)	0.055 in. (1.4 mm)	0.060 in. (1.5 mm)	0.060 in. (1.5 mm)

Product properties: WPC ambient (1)

Property	Test method	WPCT	WPC/B	WPC-C30
Backing				
Tensile strength	ASTM D-638	3400 psi (23.5 MPa)	3400 psi (23.5 MPa)	3400 psi (23.5 MPa)
Elongation	ASTM D-638	650%	650%	650%
Hardness, Shore D	ASTM D-2240	55	55	55
Shrink force	ASTM D-638 150°C (302°F)	40 psi	40 psi	40 psi
Dielectric strength	ASTM D-149	1000 volts/mil 38 kV/mm	1000 volts/mil 38 kV/mm	1000 volts/mil 38 kV/mm
Water absorption	ASTM D-570	0.04%	0.04%	0.04%
Adhesive				
Softening point	ASTM E-28	90°C (194°F)	90°C (194°F)	92°C (198°F)
Lap shear	ASTM D-1002 EN 12068 @ 10 mm(0.4")/min.	35 psi 22 N/cm²	35 psi 22 N/cm²	6 N/cm²

Product properties: WPC ambient (2)

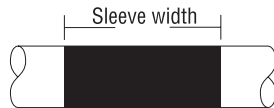
Property	Test method	WPCT	WPC/B Typical Value	WPC-C30
Sleeve				
Peel to Steel	ASTM D-1000 EN 12068 @ 10mm (0.4")/min.	14 lbs/in.width 1.6 N/mm	14 lbs/in.width 1.6 N/mm	0.9 N/mm
Cathodic disbondment	EN 12068, 30 days	8 mm radius	8 mm radius	9 mm radius
Impact resistance	ASTM G-14 EN 12068	35 in-lbs > 8 Nm	50 in-lbs > 8 Nm	> 15 Nm
Penetration resistance	ASTM G-17 EN 12068 class B30 (1 N/mm ²) class C30 (10 N/mm ²)	> 0.6 mm *	> 0.6 mm *	> 0.6 mm *

* Remaining coating thickness

Ordering information

WPCT, WPC/B and WPC-C30 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.

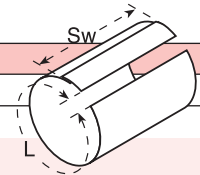
Take a 10% shrinkage during installation of sleeve width into account when calculating the minimum sleeve width.

* Cut piece / Uni-sleeve

Example: WPCT-10750X17/UNI - WPC-10750X17/B/UNI - WPC-C30-DN250-450

* Roll form (closure patches to be ordered separately)

WPC...	Product type	Standard Ordering options
10750	Outside pipe diameter in mils	2.375" – 68.000" ⁽¹⁾
DN250	Pipe diameter in DN	DN50 – DN 1700 ⁽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⁾
450	Sleeve width in mm (Sw)	17" (17.75 or 450 mm) ⁽¹⁾ , 24" (23.5 or 600 mm) ⁽¹⁾
/UNI	Designates pre-attached closure patch	optional



⁽¹⁾ Above pipe diameter 20" (DN500) in high shear and high stress environments, the use of WPC-C50, HTLP60 or others are recommended.

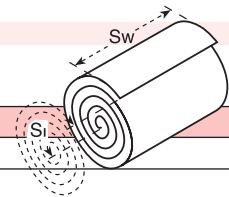
⁽²⁾ Nominal width

Example: WPCT-17x100-RL

* Closure patch

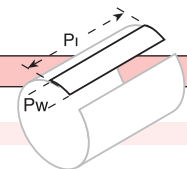
Standard Ordering options

WPC...	Product type	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 (SI)	100 ft (= 30 m), 66 ft (= 20 m, for C30/width 34" (870 mm) only)



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 (PI)	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 application table AT-GIRTHWELD-REV-5-0506. For proper product installation, see latest installation instruction.

* Raychem is a trademark of Tyco Electronics Corporation and used under license by Covalence Specialty Materials Corporation



Oficinas en Estados Unidos

Polyken
1211 San Dario Ave. No. 1481
Laredo, Tx. 78040
Tel. : (956) 220-3812

Oficinas México:

Polyken
Prolongación Estadio Azteca No.18
Col.: El Caracol, C.P.: 04300
México, D.F., Delegación: Coyoacan
Tel.: (55) 5528-0161; (55) 5528-0052
Fax.: (55) 5424-1920
ventasyservicio@polyken.com.mx
direccion@polyken.com.mx

Bodega en Estados Unidos

Polyken
406 Enterprise Rd.
Interamerica Park
Laredo, Tx 78045
Tel.: (956) 727-2491
Fax.: (956) 724-8509
Contacto: Jesús Alberto Marina Delgado