

The WPC C50 is a two-layer field-joint coating system for pipeline operating at ambient and elevated temperature.

Product description

WPC-C50, field-joint coatings.

Construction: Two-layer system:

First layer: Visco-elastic adhesive sealant.

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

WPC C50 is a wraparound heat-shrinkable sleeve specially suitable for higher stress conditions caused both by elevated temperatures and by soils with severe contraction between wet-dry cycles. The WPC C50 is compatible with most commonly used steel pipe coatings and are used for girth weld protection or to recoat (rehabilitate) long pipe sections and large radius bends. WPC may be cut to the appropriate length to cover all pipe diameters.

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

- 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.
- Available as all-in-one unit or roll form**
 Saves money by keeping inventory and logistics costs low.
- High shear resistance**
 WPC offers 'safer protection'.
- No special equipment (standard gas torch & a roller) or skills required**
 No primer required.
 Makes installation fast and easy.
 Keeps installation costs low.

Product selection guide

	WPC-C50
Max. operating temperature	60°C (140°F)
Compatible line coatings	PE, FBE, Tape & Coal Tar
Min. preheat temperature	80°C (176°F)
Recommended pipe preparation	ST2½ - ST3 or SA 2½
Soil stress restrictions	None
Performance	EN 12068 Class C50

Product thickness

	WPC-C50
Backing (as supplied)	0.040 in. (1.0 mm)
Backing (fully free recovered)	0.055 in. (1.4 mm)
Adhesive (as supplied)	0.060 in. (1.5 mm)

Product properties: WPC high temperature (1)

Property	Test method	Typical value WPC-C50
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,	40 psi (0.28 MPa)
Dielectric strength	ASTM D-149	900 volts/mil (35 KV/mm)
Water absorption	ASTM D-570	0.05%
Adhesive		
Softening point	ASTM E-28	82°C (180°F)
Lap shear	ASTM D-1002	120 psi @ 23°C (73°F)
		3 psi @ 60°C (140°F)
		80 N/cm ² @ 23°C (73°F)
	EN 12068	7 N/cm ² @ 50°C (122°F)
	@ 10 mm (0.4")/min.	

Product properties: WPC high temperature (2)

Property	Test method	Typical value WPC-C50
Sleeve		
Peel to Steel	ASTM D-1000	45 lbs/in.width @ 23°C (73°F)
	EN 12068	5.6 N/mm @ 23°C (73°F)
	@ 10 mm (0.4")/min.	0.5 N/mm @ 50°C (122°F)
Cathodic disbondment	EN 12068	9 mm radius, @ 23°C (73°F)
	ASTM G-42, 30 days	4 mm radius, @ 60°C (140°F)
Low temperature flexibility	ASTM D-2671-C	-25°C (-13°F)
Impact resistance	ASTM G-14	
	EN 12068, Class C	> 15 Nm
Penetration resistance	ASTM G-17	no holiday with 10 kV detector @ 60°C (140°F)
	EN 12068, Class C50	> 0.6 mm * @ 50°C (122°F)

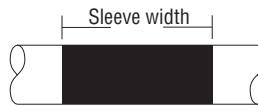
* Remaining coating thickness

Ordering information

WPC-C50 type products are available:

- 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 patch to be ordered separately)

* Cut piece / Uni-sleeve



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 15% shrinkage during installation of sleeve width into account when calculating the minimum sleeve width.

Example: WPC C50-10750X17 - WPC-C50-DN250-450

WPC...	Product type	Standard ordering options: WPC-C50
10750	Outside pipe diameter in mils	2.375" – 48.000"
DN250	Nominal pipe diameter in DN	DN50 – DN1200
17	Sleeve width in inches (Sw)	11" (285 mm) ⁽¹⁾ , 17" (450 mm) ⁽¹⁾ , 24" (600 mm) ⁽¹⁾ , 34" (870 mm) ⁽¹⁾
450	Sleeve width in mm (Sw)	450 mm (17") ⁽¹⁾ , 600 mm (24") ⁽¹⁾
/UNI	Designates pre-attached closure patch	optional

* Roll form (closure patches to be ordered separately)

Example: WPC C50-17x100-RL

WPC...	Product type	Standard ordering options: WPC-C50
17	Roll width in inches (Sw)	11" (285 mm) ⁽¹⁾ , 17" (450 mm) ⁽¹⁾ , 24" (600 mm) ⁽¹⁾ , 34" (870 mm) ⁽¹⁾
100	Roll length in feet (SI)	100 ft (30 m), 66 ft (= 20 m, for C50/width 34" (870 mm) only)

* Closure patch

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" (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 latest application table AT-GIRTHWELD.

For proper product installation, see latest installation instruction.

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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