



# WPCT

## Wraparound Girth Weld Sleeve

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



Market	Application	Temperature Range	Performance
Offshore Pipelines Gas & Oil Pipelines Pipeline Rehabilitation Pre-Insulated Pipelines Water Distribution, Infrastructure and Transmission	Girth Weld Large Radius Bends	up to 40°C (104°F)**	EN 12068 class B30 AWWA-C-216

### System Description

**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).

WPCT is a wraparound heat-shrinkable, ready-to-fit assembly for the corrosion protection of field girth weld joints in distribution and transmission systems. WPCT is compatible with standard pipe coatings. WPCT 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 heatshrinkable 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 Advantages

- **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.
- **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.

- **Low preheat sensitivity & proven functionality**  
Installation friendly in combination with high functional performance.
- **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

- **Max operating temperature**  
40°C (104°F)\*\*
- **Compatible line coatings**  
PE, FBE, PP, Tape, Coal Tar & Asphalt
- **Min preheat temperature**  
60°C (140°F)
- **Recommended pipe preparation**  
ST 2½ - ST 3 or SA 2½
- **Soil Stress Resistance**  
Moderate
- **Performance**  
EN 12068 class B30  
AWWA-C-216

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

### Product Construction

	WPCT	WPCT/D
• <b>Backing (as supplied)</b>	0.55 mm (0.22 in.)	1.50 mm (0.59 in.)
• <b>Backing (fully free recovered)</b>	0.76 mm (0.30 in.)	2.00 mm (0.79 in.)
• <b>Adhesive (as supplied)</b>	1.40 mm (0.55 in.)	1.00 mm (0.39 in.)

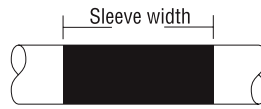
## Product Properties

Properties	Test Method	Typical Value
<b>Backing</b>		
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%
<b>Adhesive</b>		
Softening point	ASTM E-28	90°C (194°F)
Lap shear	ASTM D-1002 EN 12068 @ 10 mm (0.40")/min.	35 psi 22 N/cm <sup>2</sup>
<b>Sleeve</b>		
Peel to steel	ASTM D-1000 EN 12068 @ 10 mm (0.40")/min	14 lbs/in. width 1.6 N/mm
Cathodic disbondment	EN 12068, 30 days	8 mm radius
Impact resistance	ASTM G-14 EN 12068	35 lbs/in. T&B: > 8 Nm /C & /D: > 15 Nm
	ASTM G-17 EN 12068, class B30	no holiday with 10 kV detector > 0.6 mm remaining thickness
Low temperature flexibility	ASTM D-2671, procedure C	-10°C (14°F)

## Ordering Information

### WPCT type products are available:

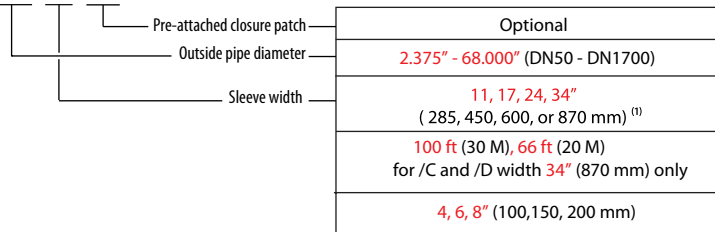
- as uni-sleeve (pre-cut sleeve with pre-attached closure patch)
- as a roll (closure patch to be ordered separately)



Min. Sleeve Width = (Bare Steel Dimension + 50 mm (2")) on each side of the fieldjoint) + 10%

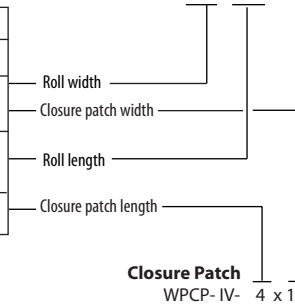
### Cut piece Uni-sleeve

WPCT -10750 x 17 / UNI



### Roll Form <sup>(2)</sup>

WPCT - 17 x 100-RL



(1) Nominal width.

(2) Closure patches to be ordered separately.

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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