



**WPC100M is a two-layer coating system for pipeline operating at ambient and elevated temperature.**

### Product description

**WPC100M field-joint coating.**

**Construction:** Two-layer system:

**First layer:** Visco-elastic adhesives sealant.

**Second layer:** Radiation cross-linked, high density polyethylene

WPC100M 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 WPC100M is compatible with most commonly used steel pipe sections and large radius bends. WPC100M may be cut to the appropriate length to cover all pipe diameters.

The installation is carried out directly on the cleaned and pre-heated surface without any primer 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"
- **Covers a wide range of operating temperature ratings**  
Offers a solution for nearly every application.
- **No special equipment (standard gas & a roller)**  
Makes installation fast and easy. Keeps installation costs low.

### Product selection guide

	WPC100M
<b>Max operating temperature</b>	80°C (176°F) *
<b>Compatible line coatings</b>	PE,PP,FBE,Asphalt Enamel,Tape & Coal Tar
<b>Min preheat temperature</b>	100°C (212°F)
<b>Recommended pipe preparation</b>	St 2 <sup>1/2</sup> - St 3 or Sa 2 <sup>1/2</sup>
<b>Soil stress restrictions</b>	Moderate

\*for offshore applications max operating temperature 100°C (212°F)

### Product thickness

	WPC100M	WPC100M/1.4-1.1**	WPC100M/C**
Backing (as supplied)	0.030 in. (0.75 mm)	0.040 in. (1.05 mm)	0.040 in (1.05 mm)
Backing (fully free recovered)	0.040 in. (1.0 mm)	0.055 in. (1.4 mm)	0.055 in (1.4 mm)
Adhesive (as supplied)	0.040 in. (1.0 mm)	0.043 in. (1.1 mm)	0.060 in (1.5 mm)

### Product properties> WPC100M (1)

Property	Test method	Typical value WPC100M
<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	40 psi
Dielectric strength	ASTM D-149	900 volts/mil (35 KV/mm)
Water absorption	ASTM D-570	0.05%
<b>Adhesive</b>		
Softening point	ASTM E-28	155°C (311°F)
Lap shear	ASTM D-1002	47psi @ 23°C (73°F) 5psi @ 80°C (176°F)
	EN 12068/DIN30672 @ 10 mm (0.4")/min.	13 N/cm <sup>2</sup> @ 23°C (73°F) 1 N/cm <sup>2</sup> @ 80°C (176°F)

\*\* Minimum order quantities apply.

## Product properties: (2)

Property	Test method	Typical Value
<b>Sleeve</b>	<b>Test method</b>	
Peel to Steel	ASTM D-1000	57 lbs/in.width @ 23°C (73°F) 4 lbs/in.width, @ 80°C (176°F)
	EN 12068 @ 10 mm (0.4")/min.	1.7 N/mm @ 23°C (73°F)
Cathodic disbondment	ASTM G42 (30 days)	17mm radius, @ 80°C (176°F)
Low temperature flexibility	ASTM D-2671-C	-40°C (-40 °F)
Impact resistance	ASTM G-14 EN 12068	64 in-lbs > 8 Nm
Penetration resistance	ASTM G-17	no holiday with 10 kV detector @ 80°C (176°F)

\* Remaining coating thickness

## Ordering information

### WPC100M type product is 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

Example: WPC100M-10750X17		(1) Nominal width
<b>Product type</b>	<b>Standard ordering options:</b>	
10750	Outside pipe diameter in mils	2.375" – 48.000"
17	Sleeve width in inches (Sw)	11" (11.25 or 285 mm) <sup>(1)(2)</sup> , 17" (17.75 or 450 mm) <sup>(1)(2)</sup> , 20" (20.25 or 514 mm) <sup>(1)(2)</sup> , 24" (23.5 or 600 mm) <sup>(1)(2)</sup> , 34" (34.25 or 870 mm) <sup>(1)(2)</sup>
/UNI	Designates pre-attached closure patch	optional

\* Roll form (closure patches to be ordered separately)

Example: WPC100M-17x100-RL		(1) Nominal width
<b>WPC100M</b>	<b>Product type</b>	<b>Standard ordering options:</b>
17	Roll width in inches (Sw)	11" (11.25 or 285 mm) <sup>(1)(2)</sup> , 17" (17.75 or 450 mm) <sup>(1)(2)</sup> , 20" (20.25 or 514 mm) <sup>(1)(2)</sup> , 24" (23.5 or 600 mm) <sup>(1)(2)</sup> , 34" (34.25 or 870 mm) <sup>(1)(2)</sup>
100	Roll length in feet (Sl)	100 ft (= 30 m), 66 ft (=20 m, for 34" (870 mm)width)

#### \* Closure patch

Example: WPCP-IV-4X17		(1) Nominal width
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) <sup>(1)</sup> , 17" (450 mm) <sup>(1)</sup> , 24" (600 mm) <sup>(1)</sup> , 34" (870 mm) <sup>(1)</sup>

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.

- (1) nominal width  
(2) not standard in all countries

DS-WPC100M-REV7-SEP11 - AARPS-0147



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