



# WPC100M

## Wraparound Girth Weld Sleeve

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



Market	Application	Temperature Range	Performance
Offshore Pipelines Gas & Oil Pipelines Pipeline Rehabilitation Pre-Insulated Pipes Wellhead, Gathering and Flow Lines	Girth Weld Water Pipe OD	onshore - up to 80°C (176°C) offshore - up to 100°C (212°F)	ISO21809-3

### System Description

**Construction:** Two-layer system

**First layer:**

Visco-elastic adhesive 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.

DS-WPC100M-REV9-OCT12 - AARPS-0147

### 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.
- **Low preheat sensitivity & proven functionality**  
Installation friendly in combination with high functional performance.
- **High shear resistance**  
WPC offers "safer protection".

- **Available as all-in-one unit or roll form**  
Saves money by keeping inventory and logistics costs low.
- **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

- **Max operating temperature**  
80°C (176°F)\*
- **Compatible line coatings**  
PP, PE, FBE, Asphalt Enamel, Tape & Coal Tar
- **Min preheat temperature**  
100°C (212°F)
- **Recommended pipe preparation**  
ST 2½ - ST 3 or SA 2½
- **Soil Stress Resistance**  
Moderate

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

### Product Construction

	WPC100M	WPC100M/1.4-1.1**	WPC100M/C**
• <b>Backing (as supplied)</b>	0.75 mm (0.030 in.)	1.05 mm (0.040 in.)	1.05 mm (0.040 in.)
• <b>Backing (fully free recovered)</b>	1.00 mm (0.040 in.)	1.40 mm (0.055 in.)	1.40 mm (0.055 in.)
• <b>Adhesive (as supplied)</b>	1.00 mm (0.040 in.)	1.10 mm (0.043 in.)	1.50 mm (0.060 in.)

\*\* Minimum order quantities apply.

## 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	40 psi
Dielectric strength	ASTM D-149	900 V/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	47 psi @ 23°C (73°F) 5 psi @ 80°C (176°F)
	EN 12068 / DIN30672 @ 10 mm (0.40")/min.	13 N/cm <sup>2</sup> @ 23°C (73°F) 1 N/cm <sup>2</sup> @ 80°C (176°F)
<b>Sleeve</b>		
Peel to steel	ASTM D-1000M	42 lbs/in. width @ 23°C (73°F) 4 lbs/in. width @ 80°C (176°F)
	ISO21809-3 DIN30672	0.7 N/mm @ 23°C (73°F) 4.8 N/mm @ 23°C (73°F)
Cathodic disbondment	ASTM G42 (30 days)	17 mm radius @ 80°C (176°F)
Low temperature flexibility	ASTM D-2671-C	-40°C (-40°F)
Impact resistance	ASTM G-14 EN12068	64 lbs/in. > 8 Nm
Penetration resistance	ASTM G-17	no holiday with 10 kV detector @ 80°C (176°F)

## Ordering Information

### WPC100M type product is available:

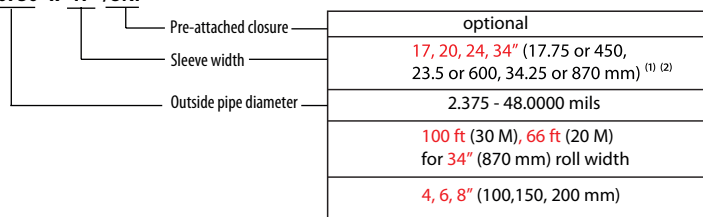
- as cut piece (pre-cut sleeve and separate closure patch)
- as uni-sleeve (pre-cut sleeve with pre-attached closure patch)
- as a roll (closure patch to be ordered separately)



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

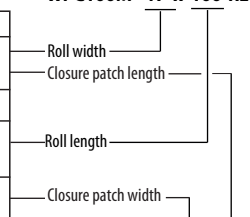
### Cut piece / Unisleeve

WPC100M - 10750 x 17 /UNI



### Roll Form <sup>(3)</sup>

WPC100M - 17 x 100-RL



Closure Patch  
WPCP-IV- 4x 17

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

(1) nominal width (2) not standard in all countries (3) Closure Patch to be ordered separately



CORROSION PROTECTION GROUP  
[www.berrycpg.com](http://www.berrycpg.com)

### Headquarters

Franklin, MA, USA  
Tel: +1 508 918 1714  
US Toll Free: +1 800 248 0149  
Fax: +1 508 918 1910  
CPG@berrypastics.com

Houston, TX, USA  
Tel: +1 713 676 0085  
US Toll Free: +1 888 676 7202  
Fax: +1 713 676 0086  
CPGH@berrypastics.com

Tijuana, Mexico  
Tel USA +1 858 633 9797  
Fax US: +1 858 633 9740  
Tel Mexico: +52 664 647 4397  
Fax Mexico: +52 664 607 9105  
CPGTJ@berrypastics.com

Westerlo, Belgium  
Tel. +32 14 722500  
Fax +32 14 722570  
CPGE@berrypastics.com

Baroda, India  
Tel: +91 2667 264721  
Fax: +91 2667 264724  
CPGIN@berrypastics.com

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