WPC100M

Wraparound Girth Weld Sleeve

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



Market

Offshore Pipelines Gas & Oil Pipelines Pipeline Rehabilitation **Pre-Insulated Pipes** Wellhead, Gathering and Flow Lines

Application

Girth Weld Water Pipe OD

Temperature Range

onshore - up to 80°C (176°C) offshore - up to 100°C (212°F)

Performance

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 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 $\stackrel{5}{\circ}$ perfect bond with the pipe surface providing $\overset{\circ}{R}$ protection against corrosion. The radiation protection against corrosion. The radiation cross-linked outer layer forms a tough barrier against mechanical damage and moisture transmission.

Product Selection Guide

• Max operating temperature
80°C (176°F)*

• Compatible line coatings

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.

1.00 mm (0.040 in.)

1.00 mm (0.040 in.)

- Compatible line coatings PP, PE, FBE, Asphalt Enamel, Tape & Coal Tar
- · Min preheat temperature 100°C (212°F)
- Recommended pipe preparation ST 21/2 - ST 3 or SA 21/2
- Soil Stress Resistance Moderate

*for offshore applications max operating

Product Construction

Backing (as supplied)

• Backing (fully free recovered)

Adhesive (as supplied)

WPC100M/1.4-1.1** WPC100M/C** WPC100M 0.75 mm (0.030 in.) 1.05 mm (0.040 in.) 1.05 mm (0.040 in.)

1.40 mm (0.055 in.)

1.10 mm (0.043 in.)

** Minimum order quantities apply.

temperature 100°C (212°F)

1.40 mm (0.055 in.)

1.50 mm (0.060 in.)

Properties	Test Method	Typical Value
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
Dielectric strength	ASTM D-149	900 V/mil (35 kV/mm)
Water absorption	ASTM D-570	0.05%
Adhesive		
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	13 N/cm ² @ 23°C (73°F)
	@ 10 mm (<mark>0.40")</mark> /min.	1 N/cm ² @ 80°C (176°F)
Sleeve		
Peel to steel	ASTM D-1000M	42 lbs/in. width @ 23°C (73°F)
		4 lbs/in. width @ 80°C (176°F)
	ISO21809-3	0.7 N/mm @ 23°C (73°F)
	DIN30672	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	64 lbs/in.
	EN12068	> 8 Nm
Penetration resistance	ASTM G-17	no holiday with 10 kV detector @ 80°C (176°F)

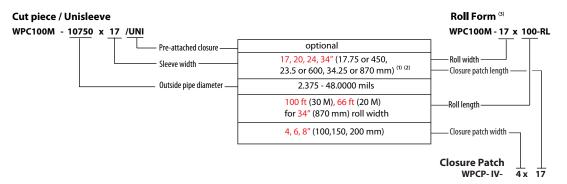
Ordering Information

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%



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

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