Covalence®
Heat Shrinkable Technology
SEALFORLIFE

WPC65M elevated temperature

InexChile
Servicios de ingenieria

The WPC65M elevated temperature is a two-layer field-joint coating system for pipeline operating at ambient and elevated temperature.

Product description

WPC65M field-joint coating.
Construction: Two-layer system:
First layer: Visco-elastic adhesive sealant.
Second layer: Radiation cross-linked, high density polyethylene with ***PCI*** (Permanent Change Indicator).

WPC65M 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 WPC65M is compatible with most commonly used steel pipe coatings and is used for girth weld protection or to recoat (rehabilitate) long pipe sections and large radius bends. WPC65M 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'.
- **Covers a wide range of operating temperature ratings**
  Offers a solution for nearly every application.
- **No special equipment (standard gas torch & a roller) or skills required**
  Makes installation fast and easy.
  Keeps installation costs low.

Product selection guide

	WPC65M
Max. operating temperature	65°C (149°F) *
Compatible line coatings	PE, PP, FBE, Tape & Coal Tar
Min. preheat temperature	70°C (158°F)
Recommended pipe preparation	ST2½ - ST3 or SA 2½
Soil stress restrictions	Moderate

* for offshore applications with infill max operating temperature 85°C (185°F)

Product thickness

	WPC65M	WPC65M/C construction
Backing (as supplied)	0.030 in. (0.75mm)	0.041 in (1.04mm)
Backing (fully free recovered)	0.040 in. (1.0 mm)	0.055 in (1.4 mm)
Adhesive (as supplied)	0.040 in. (1.0 mm)	0.060 in (1.5 mm)

Product properties: WPC65M (1)

Property	Test method	Typical value WPC65M
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 volts/mil (35 KV/mm)
Water absorption	ASTM D-570	0.05%
Adhesive		
Softening point	ASTM E-28	134°C (273°F)
Lap shear	ASTM D-1002	60 psi @ 23°C (73°F)
		4 psi @ 65°C (149°F)
	EN 12068/DIN30672	9 N/cm² @ 23°C (73°F)
	@ 10 mm (0.4")/min.	1 N/cm² @ 65°C (150°F)

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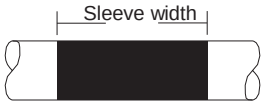
Product properties: WPC 65M (2)

Property		Typical Value WPC65M
Sleeve	**Test method**	
Peel to Steel	ASTM D-1000	50 lbs/in.width @ 23°C (73°F)
		3 lbs/in.width, @ 65°C (149°F)
	EN 12068	1.5 N/mm @ 23°C (73°F)
	@ 10 mm (0.4")/min.	0.2 N/mm @ 65°C (149°F)
Cathodic disbondment	ASTM G-42, 30 days	7 mm radius, @ 65°C (149°F)
Low temperature flexibility	ASTM D-2671-C	-14°C (6.8°F)
Impact resistance	ASTM G-14	80 in-lbs
	EN 12068, Class C	> 8 Nm
Penetration resistance	ASTM G-17	no holiday with 10 kV detector @ 65°C (149°F)
*	EN12068 class B	> 8 Nm
	EN12068 class C*	> 15 Nm
Remaining coating thickness	* for WPC65M/C construction	

Ordering information

WPC65M type product is available:

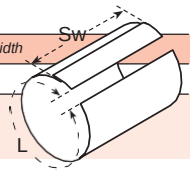
- As cut plece (pre-cut sleeve and separate closure patch)
- As Uni-sleeve (pre-cut sleeve with pre-attached closure patch)
- As a roll (closure patch to be ordered separately)



-Select sleeve widtg that will overlap onto the mill applied coating by 2 inches (50 mm) minimum on each side of the weld joint. Take a 10% shrinkage during installation of sleeve width into account when calculate-ing the minimum sleeve width.

Example: WPC65M-10750X17/UNI

(1) Nominal width

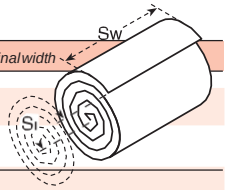


WPC...	Product type	Standard ordering options: WPC65M
10750	Outside pipe diameter in mils	2.375" – 48.000"
17	Sleeve width in inches (Sw)	11" (11.25 or 285mm) (1), 17"(17.75 or 450mm) (1), 24"(23.5 or 600mm) (1), 34"(34.25 or 870 mm)(1)
É1 I	Designates pre-attached closure patch	optional

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

Example: WPC65M-17x100-RL

(1) Nominal width

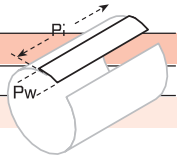


WPC65M	Product type	Standard ordering options: WPC65M
17	Roll width in inches (Sw)	11" (11.25 or 285 mm) (1), 17"(17.75 or 450 mm) (1)
100	Roll length in feet (Sl)	24" (23.5 or 600mm) , 34"(34.25 or 870mm) (1)
		100 ft (30m), 66ft

*** Closure patch**

Example: WPCP-IV-4X17

(1) Nominal width



4	Closure patch width in inches (Pw)	4" (100 mm), 5" (125 mm), 6" (150 mm), 8" (200 mm)
17	Closure patch length in inches (Pl)	11"(11.25 or 285 mm) (1), 17"(17.75 or 450 mm) (1)
		24" (23.5 or 600 mm) , 34"(34.25 or 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.

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