

COVALENCE[®] WPC120

Product Information

Product description: Covalence[®] WPC120 is a two-layer wrap-around heat-shrinkable sleeve field-joint coating system designed to meet the productivity and performance requirements of onshore/offshore pipelines.

Construction: Two-layer system

- *First layer:* High shear strength copolymer adhesive layer.
- *Second layer:* Radiation-cross-linked, high density polyethylene

Covalence[®] WPC120 is used for the girth weld protection of pipelines and spools with and without concrete weight coatings. WPC120 is fully compatible with a wide range of infill systems for concrete weight coated pipe.

The system allows for ease of installation whilst ensuring long term corrosion protection in submerged conditions.

The pre-attached fibre reinforced closure patch is designed for fast and secure installation during sleeve recovery.

The adhesive technology is formulated to 'seal for life' guarding against long term heat induced brittleness and cathodic disbondment forces.

The HDPE radiation cross-linked, UV stabilised outer layer shrinks rapidly to form a chemically resistant barrier against mechanical damage and moisture transmission.

Features:

- High operating temperature rating.
- Excellent long term aging performance.
- Dimpled backing provides a "permanent change" indicator for application of heat.
- Available as a one-piece wrap-around unit or in roll form.
- No special equipment required (standard gas torch & roller).

Benefits:

- Provides high functional performance and safety.
- Ensures correct application heat & allows easy post-heat inspection. Reliable inspectability at any time.
- Saves money by keeping inventory and logistics costs low.
- Fast installation for the highest productivity rates.

Product selection guide

Max operating temperature	120°C (248°F)
Compatible line coatings	FBE, RAYCLAD120
Min. preheat temperature	190-210°C (374-410°F)
Recommended pipe preparation	Sa 2½

Product properties

Backing

Property	Test method	Typical value
Tensile strength at break	ASTM D-638	2700 psi @ 23°C (73°F) 660 psi @ 120°C (248°F)
Elongation at break	ASTM D-638	580% @ 23°C (73°F) 560% @ 120°C (248°F)

Heat aging followed by Elongation at break	ASTM D-3045, 21 days @ 150°C (302°F) ASTM D-638	450%
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Hardness, Shore D	ASTM D-2240	57
Shrink force	ASTM D-638, 150° C (302°F)	40 psi

Dielectric strength	ASTM D-149	800 V/mil 31.5 kV/mm
Moisture absorption	ASTM D570	0.06%

Adhesive

Property	Test method	Typical value
Softening point	ASTM E-28	175°C (347°F)
Lap shear	ASTM D-1002	1300 psi @ 23°C (73°F) 100 psi @ 120°C (248°F)

Shear resistance	EN 12068, 10 mm/min	7 N/mm ² @ 23°C (73°F) 0.7 N/mm ² @ 120°C (248°F)
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Installed sleeve

Property	Test method	Typical value
Peel to steel	ASTM D-1000	30 lb/in
Peel to steel	EN 12068, 10 mm/min	4 N/mm @ 23°C (73°F) 0.7 N/mm @ 120°C (248°F)

Cathodic disbondment	ISO 21809-3, 28 days, @ 95°C (203°F)	17 mm radius
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Hot water immersion	ASTM D-870 @ 90°C (194°F), 120 days	No delamination, no blisters or water under sleeves
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Soil stress creep resistance	TP206 @ 120°C (248°F), 24 hr	0.002 in (0.051 mm)
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Impact resistance	EN 12068	Pass 8 J
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Indentation resistance	EN 12068, class B 120°C (248°F)	Pass
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Note: The typical values in this data sheet are based on lab prepared SA 2 ½ samples. For project specific requirements please consult your local SFL representative.

Product thickness

	/B	/1-1.75
Backing as supplied	0.75 mm (0.030 in)	0.75 mm (0.030 in)
Backing fully free recovered	1.00 mm (0.039 in)	1.00 mm (0.039 in)
Adhesive as supplied	1.00 mm (0.039 in)	1.75 mm (0.069 in)

Ordering information			General information	
<p>Covalence® WPC120 type products are available as uni-sleeve (pre-cut with pre-attached closure patch).</p> <p>Installation accessories EQ-HEAT-SHIELD-150X3X25 m to protect the line coating while preheating the steel area</p> <p>Select sleeve width that will overlap onto the mill-applied coating by 2 inches (50 mm) minimum on each side of the weld joint. Take a 15% shrinkage during installation of sleeve into account when calculating minimum sleeve width.</p>			<p>Product dimension Sleeve cut lengths and appropriate closure patch widths depend on the pipe size and product construction, see latest application table AT-GIRTHWELD.</p>	
<p>Uni-sleeve</p>			<p>Installation guide For proper product installation, refer latest application guideline.</p>	
<p>Example WPC120-10750X17/B</p>			<p>Handling Handle with care. Keep boxes upright.</p>	
	Designation	Standard ordering options	<p>Storage Store indoor, clean and dry, away from direct sunlight in a cool place below +50°C. Unlimited shelf life.</p>	
10750	Outside pipe diameter (mils)	2.375" – 48.000" (DN50 – DN2500)	<p>Documentation Extensive information is available on our web-site. Application instructions and other documentation can be obtained by contacting our head office, your local Seal For Life representative or by sending an email to info@sealforlife.com</p>	
17	Sleeve width (in)	17 (17.75" or 450 mm)* 20 (20.25" or 514 mm)* * <i>nominal width</i>	<p>Certified Applicators Application of the described coating system shall be carried out by certified personnel only.</p>	
		Width can be tailored to the project subject to minimum order quantities.	<p>Installation Training Seal For Life specialists will train your appointed applicators to correctly install and test Covalence sleeve systems. On training completion project specific certificates will be issued.</p>	
/B	Designates product thickness	/B, /1-1.75 Production constructions can be tailored to suit specific projects needs subject to minimum order quantities.	<p>Field Service Support Seal For Life have a global team of specialists with appropriate offshore certification available to meet your project service needs.</p>	
OS	Optional note in product description which designates it as an offshore sleeve with pre-attached closure patch and corner profile.	Width of closure patch is dependent on pipe diameter.		



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