

## COVALENCE® WPC120-OS

### 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 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 offshore 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 properties

Backing		
Property	Test method	Typical value
<b>Tensile strength at break</b>	ASTM D-638	2700 psi @ 23°C (73°F) 660 psi @ 120°C (248°F)
<b>Elongation at break</b>	ASTM D-638	580% @ 23°C (73°F) 560% @ 120°C (248°F)
<b>Heat aging followed by Elongation at break</b>	ASTM D-3045, 21 days @ 150°C (302°F) ASTM D-638	450%
<b>Hardness, Shore D</b>	ASTM D-2240	57
<b>Shrink force</b>	ASTM D-638, 150° C (302°F)	40 psi
<b>Dielectric strength</b>	ASTM D-149	800 V/mil 31.5 kV/mm
<b>Moisture absorption</b>	ASTM D570	0.06%
Adhesive		
Property	Test method	Typical value
<b>Softening point</b>	ASTM E-28	175°C (347°F)
<b>Lap shear</b>	ASTM D-1002	1300 psi @ 23°C (73°F) 100 psi @ 120°C (248°F)
<b>Shear resistance</b>	EN 12068, 10 mm/min	7 N/mm <sup>2</sup> @ 23°C (73°F) 0.7 N/mm <sup>2</sup> @ 120°C (248°F)
Installed sleeve		
Property	Test method	Typical value
<b>Peel to steel</b>	ASTM D-1000	30 lb/in
<b>Peel to steel</b>	EN 12068, 10 mm/min	4 N/mm @ 23°C (73°F) 0.7 N/mm @ 120°C (248°F)
<b>Cathodic disbondment</b>	ISO 21809-3, 28 days, @ 95°C (203°F)	17 mm radius
<b>Hot water immersion</b>	ASTM D-870 @ 90°C (194°F), 120 days	No delamination, no blisters or water under sleeves
<b>Soil stress creep resistance</b>	TP206 @ 120°C (248°F), 24 hr	0.002 in (0.051 mm)
<b>Impact resistance</b>	EN 12068	Pass 8 J
<b>Indentation resistance</b>	EN 12068, class B 120°C (248°F)	Pass

*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 selection guide

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

### Product thickness

	/B	/1-1.75
<b>Backing as supplied</b>	0.75 mm (0.030 in)	0.75 mm (0.030 in)
<b>Backing fully free recovered</b>	1.00 mm (0.039 in)	1.00 mm (0.039 in)
<b>Adhesive as supplied</b>	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><b>Product dimension</b> Sleeve cut lengths and appropriate closure patch widths depend on the pipe size and product construction, see latest application table AT-GIRTHWELD.</p>	
<p><b>Uni-sleeve</b></p>			<p><b>Installation guide</b> For proper product installation, refer latest application guideline.</p>	
<p><b>Example</b> <b>WPC120-10750X17/B-OS</b></p>			<p><b>Handling</b> Handle with care. Keep boxes upright.</p>	
	<b>Designation</b>	<b>Standard ordering options</b>	<p><b>Storage</b> Store indoor, clean and dry, away from direct sunlight in a cool place below +50°C. Unlimited shelf life.</p>	
<b>10750</b>	Outside pipe diameter (mils)	2.375" – 48.000" (DN50 – DN2500)	<p><b>Documentation</b> 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 <a href="mailto:info@sealforlife.com">info@sealforlife.com</a></p>	
<b>17</b>	Sleeve width (in)	17 (17.75" or 450 mm)* 20 (20.25" or 514 mm)* * <i>nominal width</i>	<p><b>Certified Applicators</b> 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><b>Installation Training</b> 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>/B</b>	Designates product thickness	/B, /1-1.75 Production constructions can be tailored to suit specific projects needs subject to minimum order quantities.	<p><b>Field Service Support</b> Seal For Life have a global team of specialists with appropriate offshore certification available to meet your project service needs.</p>	
<b>OS</b>	Designates offshore sleeve with pre-attached closure patch and corner profile.	Width of closure patch is dependent on pipe diameter.		

Seal For Life Industries is a committed partner to the Offshore Industry with over 35 years of experience. With the broadest product range in the industry we offer corrosion protection/sealing solutions and services for a wide range of applications including field joint coatings, subsea installations, splash zone, topsides, coating repairs, J tube fillers and wind farm structures.



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