

COVALENCE[®] PPS120-OS

Product Information

Product description: The PPS120-OS is a 3-component field-joint coating system for high temperature, polypropylene coated or FBE coated offshore pipelines with Marine Mastic or PU infill, operating at up to 121°C (250°F) temperature.

Construction: Three-component system

- *First component:* High shear strength copolymer adhesive layer.
- *Second component:* Thick, radiation cross-linked polyethylene layer with PCI (Permanent Change Indicator).
- *Third component:* High Temperature Adhesive Strips.

PPS120-OS with PCI is a wrap-around, heat-shrinkable sleeve designed for corrosion prevention and sealing of girthweld joints. The system is designed to be applied with special and user-friendly preheating methods. While installing, PPS120-OS with PCI is wrapped around the joint, a closure patch is then installed (already pre-attached if Uni-sleeve) forming a tube, and the sleeve is shrunk in place. Using installation components provided with the PPS120-OS.

Features:

- Dimpled backing provides a “permanent change” indicator for application of heat.
- Available as a one-piece wrap-around unit or in roll form.
- Specially designed application tools usable for all diameters.
- High shear resistance.
- High operating temperature rating.

Benefits:

- Ensures correct application heat & allows easy post-heat inspection. Reliable inspectability at any time.
- Saves money by keeping inventory and logistics costs low.
- Provides high functional performance and safety.
- Top performance in demanding conditions.

Product selection guide

Max operating temperature	121°C (250°F).
Compatible line coatings	PP, FBE
Min. preheat temperature	200-210°C (392-410°F)
Recommended pipe preparation	Sa 2½ or ST3

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)
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/mmm
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)

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
Hot water immersion	ASTM D-870 @ 90°C (194°F), 120 days	No delamination, no blisters or water under sleeves
Soil stress creep resistance	TP206 @ 120°C (248°F), 24 hr	0.002 in (0.051 mm)
Impact resistance	EN 12068	Pass 8 J
Indentation resistance	EN 12068, class B 2°C (248°F)	Pass

Note: The typical values in this data sheet are based on lab prepared SA 2 ½ samples.

Values shown are not to be interpreted as product specifications.

Product thickness

	/B	/I -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)

General order information		General order information (continued)																
<p>Covalence® PPS120-OS type products are available as a total system. The system includes the PPS120 sleeves, system accessories and installation accessories.</p> <p>The PPS120 sleeves are ordered</p> <ul style="list-style-type: none"> As cut piece (pre-cut with separate closure patch) As Uni-sleeve (pre-cut with pre-attached closure patch) As a roll (closure patches to be ordered separately) <p>System accessories</p> <ul style="list-style-type: none"> S1135-50X1X30M-PL-RL or S1135-75X1X30M-RL mastic strip onto PP line coating to be ordered separately On FBE line coating no mastic strips are needed. <p>Installation accessories</p> <ul style="list-style-type: none"> EQ-HEAT-SHIELD-150X3X25 m to protect the PP and FBE line coating while preheating the steel area EQ-PP-PROTECT-150X0.25X30 m to wrap around the PP line coating while preheating steel area to 200°C (392°F) to prevent the glass fiber heat shield to stick into the PP line coating <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>Installation guide For proper product installation, see latest installation instruction.</p> <p>Handling Handle with care. Keep boxes upright.</p> <p>Storage Store indoor, clean and dry, away from direct sunlight in a cool place below +50°C. Unlimited shelf life.</p>																
<p>Cut piece / Uni-sleeve</p> <table border="1"> <thead> <tr> <th>Example</th> <th>Designation</th> <th>Standard ordering options</th> </tr> </thead> <tbody> <tr> <td>10750</td> <td>Outside pipe diameter (mils)</td> <td>2.375" – 48.000" (DN50 – DN2500)</td> </tr> <tr> <td>17</td> <td>Sleeve width (in)</td> <td>11 (11.25" or 285 mm)*, 17 (17.75" or 450 mm)*, 24 (23.6" or 600 mm)*</td> </tr> <tr> <td>/B</td> <td>Product thickness</td> <td>/B, /1-1.75</td> </tr> <tr> <td>UNI</td> <td>Designates pre-attached closure patch</td> <td>Optional</td> </tr> </tbody> </table> <p>* nominal width</p>		Example	Designation	Standard ordering options	10750	Outside pipe diameter (mils)	2.375" – 48.000" (DN50 – DN2500)	17	Sleeve width (in)	11 (11.25" or 285 mm)*, 17 (17.75" or 450 mm)*, 24 (23.6" or 600 mm)*	/B	Product thickness	/B, /1-1.75	UNI	Designates pre-attached closure patch	Optional	<p>Information</p> <p>Documentation Extensive information is available on our website. Application instructions and other documentation can be obtained by contacting our head office, from our local distributor or by sending an email to info@sealforlife.com</p> <p>Certified staff Application of the described coating system should be carried out by certified personnel.</p>	
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