

COVALENCE® BLUE 60

Product Information

Product description: Covalence® BLUE 60 system is a two-layer wrap-around heat-shrinkable sleeve field-joint coating system for pipelines operating at ambient and elevated temperatures.

Construction: Two-layer system

- **First layer:** Visco-elastic butyl based adhesive
- **Second layer:** Radiation cross-linked, high density polyethylene with permanent Change Indicator (PCI). Available in Blue backing.

The BLUE 60 is compatible with most commonly used steel pipe coatings and is used for onshore girth weld protection or to recoat (rehabilitate) long pipe sections and large radius bends. The installation is carried out directly on the cleaned and pre-heated pipe surface without any primer required. During installation, the heat-shrinkable sleeve is wrapped around and recovered to form a tight bond around the joint. During recovery, the adhesive softens and flows to form a tenacious bond to the pipe surface providing protection against corrosion. The radiation cross-linked outer layer forms a tough barrier against mechanical damage and moisture transmission.

Features:

- Low preheat temperature
- Proven functionality
- Excellent aging performance
- Superior cathodic disbondment and hot water immersion resistance
- No special equipment (standard gas torch & a roller)
- Dimpled backing provides a "permanent change" indicators for heat application
- **Complies with CSA Z245.30-14 (System FC4)**

Benefits:

- Installation friendly in combination with high functional performance
- No shelf life issues
- Offers the optimum barrier protection against corrosion
- Fast and easy installation keeps installation costs low
- Dimpled backing allows easy post-heat inspection

Product selection guide

Max operating temperature	60°C (140°F)
Compatible line coatings	PE, PP, FBE, Coal Tar, DFBE
Min. preheat temperature	60°C (140°F)
Recommended pipe preparation	Sa 2½ or ST 2 ½ - ST3
Soil stress restrictions	Moderate

Product thickness*

	/B	/1.0-1.2
Backing as supplied	0.75 mm (0.030 in)	0.75 mm (0.030 in)
Backing fully free recovered	1.00 mm (0.04 in)	1.00 mm (0.04 in)
Adhesive as supplied	1.00 mm (0.04 in)	1.20 mm (0.047 in)

* Minimum order quantities may apply

Product properties of Covalence® BLUE 60

Backing		
Property	Test method	Typical value
Colour	Visual	Blue
Tensile strength at break	ASTM D638	22.8 MPa (3300 psi)
Elongation at break	ASTM D638	600 %
Specific gravity	ASTM D792	0.97 g/cm³
Hardness, Shore D	ASTM D2240	57
Shrink force	ASTM D638, @ 150°C (302°F)	40 psi
Dielectric Strength	ASTM D49	750 V/mil (29.5 kV/mm)
Water Absorption	ASTM D570	<.04%
Adhesive		
Property	Test method	Typical value
Lap shear	ASTM D1002 (@ 50mm/min) @ 23 °C (73°F) @ 65 °C (149°F)	414 kPa (60 psi) 24 kPa (3.5 psi)
	EN 12068 @ 23 °C (73°F) @ 65 °C (149°F)	0.09 N/mm² 0.01 N/mm²
Installed sleeve		
Property	Test method	Typical value
Peel to Steel and mainline coating	CSA245.21 Clause 12.4 @ 23 °C (10 mm/min)	Blasted Steel 1.3 N/mm PWB Steel 1.1 N/mm PE Coating 1.3 N/mm
Cathodic disbondment	CSA245.21 Clause 12.3 @ 23 °C/(73°F) @ 65°C (149°F)	0 mm radius (Self healed) 5 mm radius
Hot Water Immersion Test followed by Peel Strength to Pipe Substrate	ISO 21809-3 @ 65°C (140°F), 28 days followed by Peel Strength @ 23°C (73°F), (10 mm/min)	1.3 N/mm
Low temperature flexibility	ASTM D2671	-25°C (-13°F)
Impact resistance	CSA245.20	3 J/mm @ -25 °C
Indentation resistance	ISO 21809-3 @ 65°C (149°F) 1 N/mm2	Residual thickness > 0.6 mm

Note: The typical values in this data sheet are based on lab prepared samples. Values shown are not to be interpreted as product specifications.

Ordering information

Covalence® BLUE 60 products are available

- As cut piece (pre-cut with separate closure patch)
- As Unisleeve (pre-cut with attached closure patch)
- As a roll (closure patches to be ordered separately)

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

Cut piece / Uni-sleeve

Example	BLUE 60 16000X17/B/(UNI)	
	Designation	Standard ordering options
BLU	Colour	Blue
16000	Outside pipe diameter	2.375" – 100.000" (DN50 – DN2500)
17	Sleeve width (in)	17 (17.75" or 450 mm)* 20 (20.25" or 514 mm)* 24 (23.50" or 600 mm)*
/B	Product thickness	/1.0-1.0
UNI	Designates pre-attached closure patch	Optional
		* nominal width

Roll form (closure patch to be ordered separately)

Example	BLUE 60 20X100/1-1.5-RL	
	Designation	Standard ordering options
	Designation	Standard ordering options
20	Sleeve width (in)	17 (17.75" or 450 mm)* 20 (20.25" or 514 mm)* 24 (23.50" or 600 mm)*
100	Roll length	100 ft (= 30 m)
/B	Product thickness	/B, /1.0-1.0
		* nominal width

Closure patches (to be ordered separately)

Example	WPCP-IV-4X17	
	Designation	Standard ordering options
4	Patch width (in)	4 (100 mm) 6 (150 mm) 8 (200 mm)
17	Patch length (in)	17 (17.75" or 450 mm)* 20 (20.25" or 514 mm)* 24 (23.50" or 600 mm)*
		* nominal width

General order information

Product dimension	Sleeve cut lengths and appropriate closure patch widths depend on the pipe size and product construction, see latest application table AT-GIRTHWELD.
Installation guide	For proper product installation, see latest application guideline.
Handling	Handle with care. Keep boxes upright.
Storage	Store indoor, clean and dry, away from direct sunlight in a cool place below +50°C (120°F). Unlimited shelf life.

Information

Documentation	Extensive information is available on SFL web-site. Application instructions and other documentation may be obtained by contacting SFL head office, from local distributor or by sending an email to info@sealforlife.com
Certified staff	Application of the described coating system should be carried out by certified personnel.



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