Covalence®
Heat Shrinkable Technology

PRODUCT DATA SHEET

COVALENCE® FCWS

Product Information

Product description: FCWS, is a thick wall, heat-shrinkable wraparound sleeve with high shrink ratio allowing irregular shapes to be coated easily. It is specifically useful for corrosion prevention and sealing of flanges in water distribution networks.

Construction: Two-layer system
- *First layer*: Visco-elastic mastic sealant.
- *Second layer*: Thick wall, radiation-cross-linked, high density polyethylene.

The installation is carried out directly on the cleaned and dried (pre-heated) flange & pipe surface without any primer being required. When heated, the FCWS sleeve shrinks and the sealant melts and flows forming a tight bond. A heat-activated, pre-attached closure is used to bond the sleeve ends together. In addition, a corrugated cardboard support sheet adds structural support in the transition area, keeping nuts and bolts free from adhesive. The bond strength builds up during cooldown, forming a moisture-proof seal that is mechanically strong and resistant to vibration, impact, abrasion and corrosive gases & fluids.

Features:
- No primer required.
- Low preheat sensitivity & proven high functionality.
- Highly resistant.
- Copes witch high transitions (high shrink ratio)
- Self-healing effect.
- No special equipment or skills required.

Benefits:
- No drying time and easy application.
- Ensures a strong bond & impervious seal.
- Minimizes inventory, thus economical.
- Makes installation fast and easy. Keeps installation costs low.

Product selection guide

Max.operating temperature	65°C (149°F)
Compatible line coatings	PE, PP, Fibre-Cement Zinc, Bitumen Paint, Cold tape.
Min. preheat temperature	60°C (140°F)
Recommended pipe preparation	ST3
Soil stress restrictions	None
Performance	EN12068 C30 ISO21809-3 Type 14A2

Product properties

Backing

Property	*Test method*	*Typical value*
Tensile strength at break	ASTM D-638 EN 60684-2	22.8 MPa
Elongation at break	ASTM D-638 EN 60684-2	600%
Hardness, Shore D	ASTM D-2240/ISO 868	57
Shrink force	ASTM D-638, 150° C (302°F)	40 psi
Dielectric strength	ASTM D-149 EN 60684-2	35 kV/mm
Moisture absorption	ASTM D-570	0.04%

Adhesive

Property	*Test method*	*Typical value*
Softening point	ASTM E-28	134°C (273°F)
Lap shear	EN 12068 @ 10 mm/min	> 0.1 N/mm^2

Installed sleeve

Property	*Test method*	*Typical value*
Peel to steel	EN 12068 @ 10 mm/min	1.1 N/mm
Impact resistance	EN 12068, Class C	> 15 J
Indentation resistance	EN 12068, Class C30	> 0.6 mm*
Resistance to joint deflection and displacement	DIN 30672	Pass
Cathodic disbondment	EN 12068 30 days	9 mm radius

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

Product thickness

	HEPS-C30-E*	MEPSC30-E**
Backing as supplied	0.7 mm (0.028 in)	0.9 mm (0.035 in)
Backing fully free recovered	1.4 mm (0.055 in)	1.4 mm (0.055 in)
Adhesive as supplied	1.5 mm (0.059 in)	1.5 mm (0.059 in)
Shrinkage	45%	36%

** used for FCWS sizes up to DN250*
*** used for FCWS sizes > DN250*

Ordering information

Covalence® FCWS products are available as a kit with:
- a HEPS-C30-E or MEPS-C30-E Uni-sleeve (pre-cut with attached closure patch)
- **a support sheet**

FCWS		
Example	**FCWS-DN600-600**	
	Designation	**Standard ordering options**
DN600	Nominal pipe diameter	DN200-1200 (8.625”-48”)
600	Sleeve width	450 mm, 600 mm

General information

Product dimension	Sleeve cut lengths and appropriate closure patch widths depend on pipe size and product construction, see application table AT-MEPS/MPSM.
Installation guide	For proper product installation, see latest installation instruction.
Application table	See AT-COVALENCE-FCWS-CUT-LENGTH
Handling	Handle with care. Keep boxes upright.
Storage	Store indoor, clean and dry, away from direct sunlight in a cool place below +50°C. Unlimited shelf life.

Information

Documentation	Extensive information is available on our web-site. 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**
Certified staff	Application of the described coating system shall be carried out by certified personnel.

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