

COVALENCE[®] CSEM

Product Information

Product description: Covalence[®] CSEM, kit providing waterproof seal between casing & carrier pipe, which comprises:

- High shrinkage Covalence[®] heat-shrinkable sleeve
- Closure patch Covalence[®] WPCP-IV
- PP support sheet

Construction: Two-layer system:

- **First layer:** Visco-elastic butyl based low preheat sealing adhesive
- **Second layer:** thick wall radiation-cross-linked, high density polyethylene with PCI (Permanent Change Indicator)
- **Additional component:** non-shrinkable, polypropylene support sheet

CSEM is a heat-shrinkable, wrap-around sleeve with a very high shrink ratio, especially developed for casing/service pipe sealing.

The special adhesive assures an excellent bond between the sleeve and bare or pre-coated pipes. The crosslinked HDPE backing gives the sleeve a high mechanical resistance as well as a high recovery capacity.

In addition to the CSEM sleeve, a support sheet is supplied which provides a smooth step-down in the transition area to ensure a tight closure and enhances the mechanical strength.

Features:

- High shrinking ratio – conforms to high transitions.
- Resists a wide range of environmental and mechanical forces.
- Sealing adhesive automatically flows and repairs minor mechanical damages
- Usable also when the service pipe is not concentric with the casing
- No special equipment (standard gas torch & a roller).
- Dimpled backing provides a PCI "permanent change indicator" for application of heat.

Benefits:

- Provides high mechanical resistance and high recovery capacity.
- Reliable, moisture-proof seal.
- Ensures a strong bond & tight seal to virtually any substrate.
- Maintains its elasticity and sealing characteristics over a wide temperature range
- Self-healing effect
- Makes installation fast and easy. Keeps installation costs low.

Product selection guide

Max operating temperature	65°C
Compatible line coatings	PE, PP, FBE, Tape & Coal Tar
Min. preheat temperature	60°C
Recommended pipe preparation	ST2½ - ST3 or SA2½ Clean, dry surface free of oil or grease
Performance	EN 12068 C30 GASD A.09.02.11

General information

Installation guide	For proper product installation, see latest installation instruction.
Handling	Handle with care. Keep boxes upright.
Storage	To ensure maximum performance, store Covalence [®] products in a dry, ventilated area. Keep products sealed in original boxes and avoid exposure to direct sunlight, rain, snow, and dust. Avoid prolonged storage temperatures above 40°C or below -10°C. Unlimited shelf life.

Product properties

Backing		
Property	Test method	Typical value
Tensile strength at break	ASTM D-638	22.8 MPa
Elongation at break	ASTM D-638	600 %
Hardness, Shore D	ASTM D-2240	55
Specific electrical insulation resistance R_{s100}	EN 12068	> 10 ¹⁰ Ωm ²
Thermal ageing followed by elongation	ASTM D-3045, 150°C, 21 days ASTM D-638, 23°C	> 450%
Dielectric Strength	ASTM D-149	35 KV/mm
Water absorption	ASTM D-570	0,04%
Adhesive		
Property	Test method	Typical value
Softening point	ASTM E-28	134°C
Shear strength	ASTM D-1002 EN 12068 @10 mm/min	35 N/cm ² 0.22 N/mm ²
Installed sleeve		
Property	Test method	Typical value
Peel to steel	ISO21809-3 / EN12068 @10 mm/min	> 1.5 N/mm
Peel to steel	ISO21809-3 / EN12068 @10 mm/min	> 1.5 N/mm
Cathodic disbondment	ISO 21809-3 @ 65°C, 28 days	< 7 mm radius
Low Temperature flexibility	ASTM D-2671-C	- 14 °C
Impact resistance	ASTM G-14 EN 12068 Class C	> 15 Nm
Indentation resistance	EN 12068 Class C30	No holiday with 10 KV detector @ 60 °C Residual thickness >0.7

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

Backing as supplied	0.90 mm
Backing fully free recovered	1.20 mm
Adhesive as supplied	1.50 mm
Support sheet	1.10 mm

Product order information

Covalence [®] CSEM type products are available		
<ul style="list-style-type: none"> • As Uni-sleeve (pre-cut with pre-attached closure patch) • As a pre-cut sleeve to measure with separated closure patch 		
Example	CSEM-DN650X800/870	
DN650X800	Carrier pipe diameter X Casing pipe diameter	
870	Supplied Sleeve width (mm)	600 and 870 mm

Documentation

Documentation Extensive information is available on our web-site. Application instructions and other documentation can be obtained by contacting our offices or by sending an email to info@tesigroup.com or info@sealforlife.com

Certified staff Application of the described coating system should be carried out by certified personnel.

OFFICIAL DISTRIBUTOR:



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