

COVALENCE® CSEM-F

Product Information

Product description: CSEM-F is a heat-shrinkable, wrap-around sleeve with a very high shrink ratio, specially developed for casing/service pipe sealing. The special adhesive inside the thick-wall CSEM-F assures an excellent bond between the sleeve and bare or pre-coated pipes. The fiberglass reinforced woven and laminated backing gives the CSEM-F sleeve a high mechanical resistance as well as a high recovery capacity. A zipper closing system allows a simple and fast installation. In addition to the CSEM-F 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.

Construction: Two-layer system

- **First layer:** Visco-elastic mastic sealant.
- **Second layer:** Fiberglass reinforced, radiation cross-linked, polyethylene backing.
- **Additional kit component:** Non-shrinkable, polypropylene support sheet.

Optional a high shear hotmelt is added on the casing pipe side of the sleeve to increase the anchoring on the casing pipe for harsh soil conditions.

CSEM-F is installed using standard gas torches. After pipe surface preparation and preheating, the support sheet is wrapped around the transition to be sealed followed by the heat-shrinkable sleeve. The sleeve is zipper-closed, forming a tube, and shrunk in place tightly fitting around the substrate. During recovery, the adhesive softens and flows to form a tight bond. The bond strength builds up during cool down and is fully retained after completion of the job.

Features:

- Fiberglass reinforced backing.
- 65% shrinkage 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 service pipe is not concentric with the casing.
- No special equipment required.

Benefits:

- Provides high mechanical resistance. Provides a high recovery capacity.
- Reduces inventory & logistics costs.
- Reliable, moisture-proof seal! Extremely tough.
- Ensures a strong bond & tight seal to virtually any substrate. Maintains its elasticity and sealing characteristics over a wide temperature range.
- "Self-healing effect". Saves time.
- Highly versatile.
- Makes installation fast and easy. Keeps installation costs low.

Product selection guide

Max operating temperature	50°C (122°F).
Compatible line coatings	PE, PP, FBE, Coal Tar, Tape, Asphalt & Plastics
Min. preheat temperature	50°C (122°F)
Recommended pipe preparation	ST3, SA 2 1/2

Product properties

Backing			
Property	Test method	Typical value	
Bursting strength	DIN 30672	3500 N	
Adhesive			
Property	Test method	Typical value	
		Visco-Elastic	Hotmelt (optional)
Softening Point	ASTM E28	92°C	94°C
Shear strength	EN 12068 @ 10 mm	0.08 N/mm²	2.6 N/mm²
Installed sleeve			
Peel strength to PE	EN 12068 @ 10 mm	0.9 N/mm	7 N/mm

Note: The typical values in this data sheet are based on lab prepared samples. A one-by-one adoption in product specifications is therefore not recommended.

Product thickness

Backing as supplied	1.30 mm
Backing fully free recovered	3.25 mm
Visco-elastic as supplied	1.20 mm
Hotmelt as supplied	0.80 mm
Support sheet	1.10 mm

Ordering information

Covalence® CSEM-F type products are available as a kit, containing

- A Uni-sleeve (pre-cut sleeve with integrated zipper closure system)
- A support sheet

Example	CSEM-F-280/110-425	
	Designation	Standard ordering options
280/110	Recovery ratio (mm)	See application table
425	Sleeve width (mm)	See application table

Application table

CSEM-F*	Min.Pipe diameter	Max.Casing diameter
280/110-425	114.3 mm (4.50")	250 mm (10")
380/140-425	139.7 mm (5.50")	355 mm (14")
540/180-425	219.1 mm (8.75")	508 mm (20")
600/215-425	273.0 mm (10.75")	560 mm (22")
760/270-600	323.9 mm (12.75")	710 mm (28")
880/320-600	355.6 mm (14.00")	813 mm (32")
1050/370-600	406.4 mm (16.00")	1016 mm (40")
1150/410-600	457.2 mm (18.00")	1118 mm (44")
1300/470-600	508.0 mm (20.00")	1270 mm (50")
1600/900-600	914.4 mm (36.00")	1524 mm (60")
1900/1140-600	1118 mm (44.00")	1828 mm (72")

* Special casing sizes can be made on request.

Installation guide	For proper product installation, see latest installation instruction.
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.
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 should be carried out by certified personnel.



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DISCLAIMER: Seal For Life Industries warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the technical data sheet when used in compliance with Seal For Life Industries' written instructions. Because many installation factors are beyond the control of Seal For Life Industries, the user shall determine the suitability of the products for the intended uses and assume all risks and liabilities in connection herewith. Seal For Life's liability is stated in its General Terms and Conditions of Sale. Seal For Life Industries makes no other warranty either express or implied. All information contained in this technical data sheet is to be used as a guide and is subject to change without notice. This technical data sheet supersedes all previous data sheets on this product. Seal For Life Industries is a registered marks of the Berry Global Group, Inc. or its affiliates.

Local distributor / representative

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