



Heat-shrinkable sleeve providing waterproof seal between casing & carrier pipe.

## Product description

**CSEM-F/ CASEAL (US) casing/carrier step-down sealing.**

**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.

CSEM-F/CASEAL (US) 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/CASEAL(US) assures an excellent bond between the sleeve and bare or pre-coated pipes.

The fiberglass reinforced woven and laminated backing gives the CSEM-F/CASEAL(US) 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/CASEAL(US) 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.

CSEM-F/CASEAL(US) 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.

## Product features/benefits

- Fiberglass reinforced backing**  
 Provides high mechanical resistance.  
 Provides a high recovery capacity.
- 65% shrinkage ratio – conforms to high transitions**  
 Reduces inventory & logistics costs.
- Resists a wide range of environmental and mechanical forces**  
 Reliable, moisture-proof seal!  
 Extremely tough.
- Specially formulated sealant**  
 Ensures a strong bond & tight seal to virtually any substrate.  
 Maintains its elasticity and sealing characteristics over a wide temperature range.
- Sealing adhesive automatically flows and repairs minor mechanical damages**  
 "Self-healing effect". Saves time.
- Zipper closure system**  
 Allows simple & fast installation.
- Usable also when service pipe is not concentric with the casing.**  
 Highly versatile.
- No special equipment required**  
 Makes installation fast and easy.  
 Keeps installation costs low.

## Product selection guide

	CSEM-F/CASUAL(US)
Max operating temperature	30°C (86°F)
Compatible line coatings	PE, PP, FBE, Tape, Coal tar, Asphalt, Plastics
Min preheat temperature	60°C (140°F)
Recommended pipe preparation	ST3 or SA 2 ½

## Product thickness

	CSEM-F/CASUAL(US)
Backing (as supplied)	0.051 in. (1.3 mm)
Backing (fully free recovered)	0.128 in. (3.25 mm)
Adhesive (as supplied)	0.047 in. (1.2 mm)
Support sheet	0.043 in. (1.1 mm)

## Product properties: CSEM-F/CASUAL (US)

Property	Test method	Typical Value
<b>Backing</b>		
Bursting strength	DIN 30672	3500 N
<b>Adhesive</b>		
Softening point	ASTM E-28	92°C (198°F)
Shear strength	EN12068 @ 10 mm(0.4")/min.	8 N/cm <sup>2</sup>
Peel strength	EN12068 @ 10 mm(0.4")/min.	9 N/cm
<b>Sleeve</b>		

Pressure tightness, angular deflection and axial displacement tests are described in the technical specification RUD6079

## Ordering information

**CSEM-F/CASEAL(US) 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

CSEM-F	Product type	Standard Ordering options
280/110	Recovery ratio in mm	See application table
425	Sleeve width in mm	See application table

### Example: CS10750

CSEM-F	Product type	Standard Ordering options
10750	Pipe diameter of the casing pipe in mils	See application table

## Application table

CSEM-F	CS*	Min Pipe diameter	Max Casing diameter
280/110-425	10750	114.3 mm (4.50")	250 mm (10")
380/140-425	14000	139.7 mm (5.50")	355 mm (14")
540/180-425	20000	219.1 mm (8.75")	508 mm (20")
600/215-425	22000	273.0 mm (10.75")	560 mm (22")
760/270-600	28000	323.9 mm (12.75")	710 mm (28")
880/320-600	32000	355.6 mm (14")	813 mm (32")
1050/370-600	40000	406.4 mm (16")	1016 mm (40")
1150/410-600	44000	457.2 mm (18")	1118 mm (44")
1300/470-600	50000	508.0 mm (20")	1270 mm (50")

\* CASEAL (US) can be made for any specific casing diameter. In this table only the sizes similar to the standard CSEM-F sizes are mentioned.

For proper product installation, see latest installation instruction.



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