Covalence®
Heat Shrinkable Technology
SEALFORLIFE

PRODUCT DATA SHEET

COVALENCE® FOPS

Product Information

Sealing system for foam injection holes in thermally insulated PE jacket pipes & casings.
Product description: Covalence® FOPS is a watertight and Mechanically strong seal of foaming holes for pre-insulated pipe casings. FOPS is a hot applied, heat-stable patch.

- *Market*: Pre-insulated pipes.
- *Applications*: Foaming hole sealing.

Construction: Two-layer system

- *First layer*: High-shear resistant thermoplastic adhesive.
- *Second layer*: Thick-walled, radiation-cross-linked, high density polyethylene.

The installation involves removing excess foam and abrading & cleaning the foaming hole area. The hole is filled with a FOPS plug or special mastic putty. The FOPS is placed centrally over the hole to be sealed. When heated, the FOPS adhesive softens and flows to form a tight bond with the substrate. The bond strength builds up during cooldown and is fully retained after completion of the job.

Features:

- No special equipment required (standard gas torch).
- Heat-and UV-stable.
- Highly shear-resistant & mechanically strong.
- No gas build-up during preheating and installation.

Benefits:

- Makes installation fast, easy and low cost.
- Acts as moisture barrier. Insulation remains functional!
- Prevents insulation from degrading. Superior sealing! Unaffected by high or low temperatures. Reliable performance!
- Secure installation.

Product selection guide

Max.operating temperature	50°C (60°C under expansion cushion)
Joint design	Standard, oversized, heat-shrinkable PE casings
Min. preheat temperature	60°C
Recommended pipe preparation	Abrading & Cleaning
Soil stress restrictions	None
Performance	300 cycles, 0.5% sand humidity 1000 cycles, 8.0% sand humidity

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, dust or other adverse environmental elements. Avoid prolonged storage temperatures above 40°C or below -20°C. Unlimited shelf life.

Product properties

Backing

Property	*Test method*	*Typical value*
Tensile strength at break	ASTM D638	22.8 MPa
Elongation at break	ASTM D638	600%
Hardness, Shore D	ASTM D2240	57
Thermal ageing	ASTM D3045, 150°C, 21 days	
Followed by elongation	ASTM D638, 23°C	> 450%
Weathering (UV) resistance	ASTM D2365, 30 days	
Followed by elongation	ASTM D638, 23°C	> 450%
Water absorption	ASTM D570	0.05%

Adhesive

Property	*Test method*	*Typical value*
Softening point	ASTM E28	94°C
Shear strength	EN 12068	2.6 N/mm^2 @ 23°C 0.75 N/mm^2 @ 50°C
Peel strength to PE	EN12068, 10 mm/min	7 N/mm

Installed sleeve

Property	*Test method*	*Typical value*
Soil stress resistance	EN 489 0.5% sand humidity 8.0% sand humidity	 Min 300 cycles Min 1000 cycles
External water pressure after soilstress	EN 489 @ 23°C, 0.7 bar, 24 hr	Pass

Ordering information

Covalence® FOPS products are available
– As finished unit

Example	**FOPS**
	Standard ordering options
FOPS 100 PRT (S100)	Foaming hole closure patch (standard pack is 100 pc in a bag)

Accessories (to be ordered separately)	
	Standard ordering options
EQ-PRESS-FOPS	PU-foam press with silicone bottom layer and aluminium top plate & handle

Product thickness

Backing as supplied	0.75 mm
Adhesive as supplied	0.80 mm
Patch diameter as supplied	92.5 mm

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 should be carried out by certified personnel.

Seal For Life Industries LLC
Franklin, MA, USA
Tel: +1 508 918 1600
US Toll Free: +1 800 248 7659
Fax:+1 812 250 0834
franklin@sealforlife.com

Seal For Life Industries Mexico S de R.L. de C.V.
Tijuana, Mexico
Tel USA +1 858 633 9797
Fax US: +1 858 633 9740
Tel Mexico: +52 664 647 4397
Fax Mexico: +52 664 607 9105
mexico@sealforlife.com

Seal For Life Industries Stopaq B.V.
Stadskanaal, the Netherlands
Tel: +31 599 696 170
Fax: +31 599 696 177
info@sealforlife.com

Seal For Life Industries BVBA
Westerlo, Belgium
Tel: +32 14 722 500
Fax: +32 14 722 570
belgium@sealforlife.com

Seal For Life India Private Ltd.
Baroda, India
Tel: +91 2667 264 721
Fax: +91 2667 264 724
india@sealforlife.com