

COVALENCE® TPS

Product Information

One-piece heat-shrinkable sleeve for corrosion protection of girth weld joints on various types of piping systems.

Product description: Covalence® TPS are heat-shrinkable, tubular sleeves which prevent corrosion of welded pipe joints in distribution lines for sizes up to 4.500"/DN100. For larger sizes, the use of the Covalence® wraparound sleeve, WPC, is recommended. This mechanically strong and flexible sleeve is compatible with all standard pipeline coatings and outer jackets.

Construction: Two-layer system

- **First layer:** Butyl based low preheat adhesive
- **Second layer:** Thick-walled, radiation-cross-linked, high density polyethylene.

The installation is carried out directly on the cleaned and dried (pre-heated) pipe surface without primer. Heat is applied to the sleeve, which shrinks to form a tight fit around the joint. While shrinking, the visco-elastic sealant homogeneously flows to cover the complete surface and fills in all surface irregularities.

Features:

- Dimpled backing provides a "Permanent Change" Indicator for application of heat.
- Excellent aging performance.
- Superior cathodic disbondment and hot water immersion resistance.
- No primer required.
- Low preheat sensitivity & proven functionality.
- No special equipment or skills required (standard gas torch).

Benefits:

- Ensures correct application of heat & allows easy post-heat inspection. Reliable inspectability at any time.
- No shelf life issues.
- Ensures a strong bond and a tight seal. Provides high peel and shear values after installation.
- Makes installation fast and easy. Keeps installation costs low.

Product selection guide

Max operating temperature	65°C (149°F).
Compatible line coatings	PE, PP,FBE, Tape, Coal Tar
Min. preheat temperature	60°C (140°F)
Recommended pipe preparation	Clean, dry and free of grease
Soil stress restrictions	Moderate
Performance	EN 12068, Class B30

Product thickness

Backing as supplied	0.64 mm (0.025 in)
Backing fully free recovered	1.00 mm (0.039in)
Adhesive as supplied	0.76 mm (0.030 in)

Product properties

Backing

Property	Test method	Typical value
Tensile strength at break	ASTM D638	3300 psi 22.8 MPa
Elongation at break	ASTM D638	600%
Hardness, Shore D	ASTM D2240	57
Shrink force	ASTM D638 150°C (302°F)	40 psi
Water absorption	ISO 62	0.04%

Adhesive

Property	Test method	Typical value
Softening point	ASTM E28	134°C (273°F)
Shear strength	ASTM D1002 EN 12068 @ 10 mm (0.4")/min	50 psi > 0.1 N/mm ²

Installed sleeve

Property	Test method	Typical value
Peel strength	ASTM D1000 EN 12068 @ 10 mm (0.4")/min	50 lb/in 1.1 N/mm
Cathodic disbondment	ASTM G42 @65°C(149°F), 30 days	7 mm radius
Hot water immersion	ASTM D870 @ 65°C (149°F), 120 days	No delamination, no blisters or water ingress
Low temperature flexibility	ASTM D2671, procedure C	-14°C (6.8°F)
Impact resistance	ASTM G14	50 in-lb
Penetration resistance	ASTM G17	No holiday with 10 kV detector

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

General order information

Covalence® TPS type products are available
– As ready-to-size tubular sleeves

Drawing sleeve width, pipe diameter.

Take a 10% shrinkage during installation of sleeve width into account when calculating the minimum sleeve width.

Example	TPS-4500X18	
	Designation	Standard ordering options
4500	Outside pipe diameter	2.375" (DN50), 3.500" (DN80), (mils) 4.500" (DN100)
18	Sleeve width (in)	18 (460 mm) * nominal width

* For pipe sizes exceeding DN100, the use of wraparound WPC sleeves is recommended.

Information

Documentation	Extensive information is available on our website. 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.