

## 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

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

### Product thickness

<b>Backing as supplied</b>	0.61 mm (0.024 in)
<b>Backing fully free recovered</b>	1.00 mm (0.039in)
<b>Adhesive as supplied</b>	0.97 mm (0.037 in)

### Product properties

#### Backing

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

#### Adhesive

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

#### Installed sleeve

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

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

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

### Information

<b>Documentation</b>	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 <a href="mailto:info@sealforlife.com">info@sealforlife.com</a>
<b>Certified staff</b>	Application of the described coating system shall be carried out by certified personnel.