

## COVALENCE<sup>®</sup> HTLP80-S

### Product Information

**Product description:** Covalence<sup>®</sup> HTLP80-S **3 layers system** is a wrap-around heat-shrinkable sleeve which replicates the structure and the performance of factory applied three-layer PE coatings.

Construction: Three-layer system

- **First layer:** Liquid epoxy, solvent-free two-component.
- **Second layer:** High shear strength copolymer adhesive.
- **Third layer:** Radiation cross-linked, high density polyethylene with permanent Change Indicator (PCI).

During installation, the epoxy is applied to the prepared pipe surface and the heat-shrinkable sleeve is immediately wrapped around the joint over the wet epoxy. Heat is then applied to the sleeve which shrinks to form a tight fit around the joint. While curing, the epoxy forms strong mechanical and chemical bonds to the pipe surface & to the copolymer adhesive layer. The cross-linked outer layer forms a tough barrier against mechanical damage and moisture transmission. If extra thickness is required over the weld bead, sleeve can be supplied with extra adhesive in the centre of the sleeve.

#### Features:

- Fully resistant to shear forces induced by soil and thermal movements.
- Sleeve applied over wet epoxy, allowing fast installation and formation of strong mechanical & chemical bonds.
- Superior cathodic disbondment and hot water immersion resistance.
- Fully reconstructs the coating of three-layer coated pipes.
- Dimpled backing provides a "permanent change" indicator for application of heat.

#### Benefits:

- The HTLP80-S is tough & lasts as long as a 3-layer, factory applied coating.
- Allows fast application combined with high performance.
- Offers the optimum barrier protection against corrosion.
- HTLP systems allow three-layer coated pipelines to have a virtually monolithic coating system.
- Dimpled backing allows easy post-heat inspection and offers a reliable inspectability at any time.

### Product properties

#### Backing

Property	Test method	Typical value
<b>Tensile strength at break</b>	ASTM D-638	3300 psi (22.8 MPa)
<b>Elongation at break</b>	ASTM D-638	600 %
<b>Hardness, Shore D</b>	ASTM D-2240	57
<b>Density</b>	ASTM D-792	0.97 kg/dm <sup>3</sup>
<b>Shrink force</b>	ASTM D-638, @150°C (302°F)	40 psi
<b>Dielectric Strength</b>	ASTM D-149	900 volts/mil (35 kV/mm)
<b>Moisture absorption</b>	ASTM D-570	0.04%

#### Adhesive

Property	Test method	Typical value
<b>Softening Point</b>	ASTM E-28	110°C (230°F)
<b>Lap shear</b>	EN12068 @ 50°C (122°F)	0.07 N/mm <sup>2</sup>

#### Installed sleeve

Property	Test method	Typical value
<b>Peel to Steel</b>	EN12068 DIN30672	3 N/mm 6 N/mm
<b>Cathodic disbondment</b>	EN12068 @ 50°C (176°F), 28 days	1 mm radius
<b>Hot water immersion</b>	ISO21809-3 @ 50°C (122°F), 100 days	P100/P0 ≥ 0.75
<b>Impact resistance</b>	EN12068 class C	> 15 J*
<b>Indentation resistance</b>	EN12068, Class C, @ 50°C (122°F)	Residual thickness > 0.6 mm *

*Note: Typical values in this data sheet are based on lab prepared samples. Values shown are not to be interpreted as product specifications. All properties are at 23°C unless otherwise specified.*

### Product selection guide

<b>Max operating temperature</b>	65°C (140°F).
<b>Compatible line coatings</b>	PE, PP, FBE, Coal Tar, DFBE.
<b>Min. preheat temperature</b>	70°C (158°F)
<b>Recommended pipe preparation</b>	Sa 2½
<b>Soil stress restrictions</b>	None
<b>Performance</b>	EN 12068 C50 UV

### THICKNESS

<b>Backing as supplied</b>	0.9 mm (0.035 in)
<b>Backing fully free recovered</b>	1.2 mm (0.047 in)
<b>Adhesive as supplied</b>	1.4 mm (0.055 in)

Product order information		
<p>Covalence® HTLP80-S products are available</p> <ul style="list-style-type: none"> <li>As Uni-sleeve (pre-cut with attached closure patch and cut corners)</li> </ul> <p>Select sleeve width that will overlap onto the mill-applied coating by 50 mm (2 inches) minimum on each side of the weld joint. Take a 10% shrinkage during installation of sleeve into account when calculating minimum sleeve width.</p>		
Uni-sleeve		
<b>Example</b>	<b>HTLP80-S-8625X22-UNI</b>	
	Designation	Standard ordering options
<b>16000</b>	Outside pipe diameter	2.375" – 100.000" (DN50 – DN2500)
<b>22</b>	Sleeve width (in.)	22 (≥ 550 mm)* 26 (≥ 650 mm)* 36 (≥ 900 mm)* * <i>nominal width</i>
<b>UNI</b>	Designates pre-attached closure patch	Optional

General information	
<b>Product dimension</b>	Sleeve cut lengths and appropriate closure patch widths depend on the pipe size and product construction, see latest application table AT-GIRTHWELD.
<b>Installation guide</b>	For proper product installation, see latest application guideline.
<b>Recommended primer</b>	HTLP type products are installed with epoxy primer. HTLP80-S is installed with S1301-M Epoxy primers are ordered separately. For more ordering information on epoxy primers see latest PDS-S1301-M.  As field application of primers may vary, consult a Seal For Life representative or Authorized Distributor for rate of coverage guidance.
<b>Handling</b>	Handle with care. Keep boxes upright.
<b>Storage</b>	Store indoor, clean and dry, away from direct sunlight in a cool place below +50°C. Unlimited shelf life.
<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 email to <a href="mailto:info@sealforlife.com">info@sealforlife.com</a>
<b>Certified staff</b>	Application of the described coating system should be carried out by certified personnel.

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