

# COVALENCE® PERP-PP

## Product Information

Repair system for damaged mill-applied PP coating or peel strips of HTLP-PP sleeves.

**Product description:** Covalence® PERP-PP is a heat-applied patch which, in combination with PP adhesives filler, offers an economically effective and high quality repair system for factory PP pipe coatings damaged mechanically during transportation, storage and laying of pipes.

- **Sleeves:** are recommended for large damaged areas (see selection table below).
- **Filler tape:** is used to fill the holiday, thus restoring the mill-applied coating thickness of the pipe.
- **Epoxy primer:** is additionally used when a 3-layer coating is required.

Construction: Two-layer or three-layer system:

- **First (optional) layer:** Liquid epoxy, solvent-free two-component.
- **Second layer:** Copolymer adhesive.
- **Third layer:** Radiation cross-linked, polypropylene (unexpanded).

Installation is done with standard gas torches. To repair a damaged area, installers round out, roughen, clean and preheat the area and apply the epoxy and the filler tape to fill out the holiday. PERP-PP, cut to size, is positioned onto the treated area and heated. During heating, the adhesive softens and flows to form a tight bond with the substrate. The bond strength builds up during cool-down and is fully retained after job completion.

### Features:

- Adaptable repair system.
- Resistant to high shear forces.
- Excellent adhesion to commercial, PP mill-applied coatings.
- Available roll form.
- No special equipment required.

### Benefits:

- Long lasting and high performance.
- Provides a virtually monolithic coating repair of high quality.
- Saves time with fast and convenient installation. Keeps inventory, logistics and installations costs low.

## Product selection guide

<b>Max operating temperature</b>	120°C (248°F).
<b>Compatible line coatings</b>	PP, HTLP-PP
<b>Min. preheat temperature -PP line coating</b>	90-100°C (194-212°F)
<b>Recommended pipe preparation</b>	Sa 2½ for Steel – Sanding disk or abrasive paper for PP linecoating
<b>Filler tape</b>	S1137 filler
<b>Epoxy primer</b>	S1401
<b>Soil stress restrictions</b>	None

## Application table

Max. damaged area for using PERP is 25 cm<sup>2</sup>.  
 For larger damaged areas, the use of heat-shrinkable sleeves is recommended (refer to Seal For Life girth weld sleeves)



## Product properties

Backing		
Property	Test method	Typical value
<b>Tensile strength at break</b>	ASTM D638	4641 psi 32 MPa
<b>Elongation at break</b>	ASTM D638	610%
<b>Hardness, Shore D</b>	ASTM D2240	56
<b>Dielectric strength</b>	ASTM D149	28 kV/mm
<b>Water absorption</b>	ASTM D570 @ 95°C (203°F), 24 hr	0.17%
<b>Elongation at break after heat ageing</b>	ASTM D638 @ 150°C (302°F), 4 weeks	490%
<b>Weathering followed by elongation at break</b>	ASTM D2565, P638	350%
Adhesive		
Property	Test method	Typical value
<b>Melting point</b>	ASTM D3418	154°C (309°F)
<b>Shear strength</b>	ISO 21809-3 @ 23°C (73°F) @ 120°C (230°F)	5.3 N/mm <sup>2</sup> 0.35 N/mm <sup>2</sup>
Installed sleeve		
Property	Test method	Typical value
<b>Peel to PP</b>	DIN 30672 (100 mm/min)	30 N/cm

## Product thickness

<b>Backing as supplied</b>	0.76 mm ( 0.030")
<b>Backing fully free recovered</b>	0.76 mm ( 0.030")
<b>Adhesive as supplied</b>	0.76 mm ( 0.030")

## General order information

Covalence® PERP-PP type products are available:

- As a roll additional components such as filler adhesive and optional epoxy needs to be ordered separately

	Standard ordering options
<b>PERP-PP-425X1000</b>	Rolls of 10 m (32.5 ft) length, 450 mm (17.75") width
<b>S1137-50X3X3000</b>	Filling adhesive <b>Note:</b> 3 rolls of filler per roll of PERP-PP
<b>S1401</b>	Epoxy primer (optional), see datasheet S1401

## General order information (continued)

<b>Installation guide</b>	For proper product installation, see latest installation instruction.
<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.

## Information

<b>Documentation</b>	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 <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.