

COVALENCE® DIRAX PP

Product Information

Product description: The DIRAX-PP system is a wrap-around heat-shrinkable sleeve reinforced with fiberglass. DIRAX-PP is designed to protect girth welds against corrosion and is the optimum joint protection for PP coated pipes used in Horizontal Directional Drilling (HDD-Pull Through). The reinforcement gives the backing greater wear resistance.

Construction: Three-layer system

- **First layer:** Liquid epoxy, solvent-free two-component.
- **Second layer:** High shear strength copolymer adhesive.
- **Third layer:** Thick, fiberglass reinforced radiation cross-linked polyethylene.
- **Additional component:** Wear cones as extra protection against pull-through forces. The wear cones are built up with liquid epoxy, solvent-free two-component reinforced with fiberglass.

During installation, adhesive strips are applied onto the PP line coating, the epoxy is applied to the prepared steel pipe surface and the heat-shrinkable sleeve is immediately wrapped around the joint over the adhesive strips and 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 radiation cross-linked outer layer forms a tough barrier against mechanical damage and moisture transmission. Finally the two-component epoxy reinforced with fiber glass is applied over the ends of the DIRAX and adjacent polypropylene coating in order to form the ultimate soil stress resistant girth weld protection.

Features:

- Highly resistant to shear and peel forces induced by soil and thermal movements.
- DIRAX-PP offers abrasion and wear resistance at pull-through comparable to mill coatings.
- Sleeve applied over wet epoxy – formation of strong mechanical & chemical bonds.
- Superior cathodic disbondment and hot water immersion resistance.
- Pre-attached closure patch.
- Low preheat requirements.

Product benefits:

- The DIRAX-PP is tough!
- Provides a monolithic coating system.
- Allows fast application – saves time! Ensures high performance.
- Offers the optimum barrier protection against corrosion.
- Allows fast and easy application.
- Makes installation faster and saves time.

Product selection guide

Max operating temperature	65°C (149°F)
Compatible line coatings	PP
Min. preheat temperature	70°C (158°F)
Recommended pipe preparation	SA 2 ½
Soil stress restrictions	None
Performance	EN 12068, Class C60 UV

Product properties

Backing		
Property	Test method	Typical value
Bursting strength	DIN 30672	2350N
Adhesive		
Property	Test method	Typical value
Softening point	ASTM E28	94°C (201°F)
Lap shear	ASTM D-1002 EN 12068 @ 10mm /min	528 psi 0.34 N/mm ² @ 60°C (140°F)
Installed sleeve		
Property	Test method	Typical value
Peel to steel	EN 12068 @ 10mm /min ASTM D-1000	11 N/mm 104 pli
Impact resistance	EN 12068, Class C ASTM G-14	Pass 15 J 170 in.lb
Indentation resistance	EN 12068, Class C60 ASTM G-17	2.3 mm * @ 60°C (140°F) Pass
Cathodic disbondment	EN 12068, 30 days ASTM G-8, 30 days	<1 mm radius @ 60°C (140°F) –self healing 0.170 in (4.33 mm)

* Remaining coating thickness

Note: The typical values in this data sheet are based on lab prepared samples.

Values shown are not to be interpreted as product specifications.

Product thickness

	mm	in
Backing as supplied	1.85	0.073
Backing fully free recovered	2.30	0.091
Adhesive as supplied	1.20	0.047

Ordering information

Covalence® DIRAX-PP type products are available as a total system. The system includes the DIRAX sleeves + system components and installation accessories.

The DIRAX sleeves are ordered as a Uni-sleeve (pre-cut sleeve with pre-attached closure patch).

Example	DIRAX-PP-16000-24	
	Designation	Standard ordering options
16000	Outside pipe diameter (mils)	3.500" – 48.000" (DN800 – DN1200)
24	Sleeve width (in)	17 (430 mm)*, 24 (600 mm)*
		* nominal width

System components (to be ordered separately)

Adhesive strips
S1135-AAX1X30M-PL-RL: adhesive strip
 AA mm wide x 1 mm thick x 30M long
 standard widths AA = 50 or 75 mm

Liquid epoxy

BULK:
S1301-M-PART-A-18L-29.7KG: epoxy part A, resin
S1301-M-PART-B-18L-18KG: epoxy part B, hardener

EQ-PR-APPLICATOR-IN-KIT-100: 100 applicators, 100 pair safety gloves, 100 mixing sticks, 100 mixing cups

TWIN PACK:
S1301-M-TP 200ML-300G-KIT(C10) : epoxy twin pack with pre-measured quantity of part A and B, applicator and pair of nitrile safety gloves.

Fibermat

FIBERMAT-100X100M: woven mat to be laminated between the 2 epoxy layers on the sleeve edges.

Installation accessories (to be ordered separately)

EQ-HEAT-SHIELD-150X3X25M to protect the PP line coating while preheating the steel area

EQ-PR-S1301-M-PUMP-A & B for bulk epoxy

General information

Application table	Sleeve cut lengths and appropriate closure patch widths depend on the pipe size, see latest application table AT-DIRAX
Installation guide	For proper product installation, see latest installation instruction AG-DIRAX-PP
Handling	Handle with care. Keep boxes upright.
Storage	Store indoor, clean and dry, away from direct sunlight in a cool place below +40°C. Unlimited shelf life.

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 shall be carried out by certified personnel.



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DISCLAIMER: Seal For Life Industries warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the technical data sheet when used in compliance with Seal For Life industries' written instructions. Because many installation factors are beyond the control of Seal For Life Industries, the user shall determine the suitability of the products for the intended uses and assume all risks and liabilities in connection herewith. Seal For Life's liability is stated in its General Terms and Conditions of Sale. Seal For Life Industries makes no other warranty, either express or implied. All information contained in this document is to be used as a guide and is subject to change without notice. This technical data sheet supersedes all previous data sheets on this product.