



HTLP-PP Wrap-around Girth Weld Sleeve

A 3-layer polypropylene-field-joint coating system for polypropylene coated pipes .



Market	Application	Temperature Range	Performance
Oil and Gas Pipelines Offshore Pipelines Pipeline Rehabilitation Pre-Insulated Pipes Well-head, Gathering and Flow Lines	Girth Weld Reconditioning / Rehab Coating System	up to 120°C	ISO 21809-3 compliant

System Description

Construction: Three-layer system

First layer:

Two component liquid epoxy.

Second layer:

High shear strength polypropylene adhesive layer.

Third layer:

Thick cross-linked polypropylene backing layer.

HTLP-PP is a wraparound, polypropylene based heat-shrinkable sleeve and is designed for corrosion prevention and sealing for polypropylene coated pipelines, operating at temperatures up to 120°C .

HTLP-PP is specially suited for higher stress conditions caused both by elevated temperatures and by soils with severe contraction between wet-dry cycles.

HTLP-PP is normally used for girth weld protection of steel pipes coated with polypropylene. The system is designed to be applied with special and user-friendly preheating methods.

Product Advantages

- **Available as a one-piece wraparound unit**
Saves money by keeping application costs low.
- **High shear resistance**
Provides high functional performance and safety.
- **High operating temperature rating**
Top performance in demanding conditions.
- **Keeps backing elasticity at elevated temperatures**
Has enhanced resistance to cracking at elevated temperatures.

Product Selection Guide

- **Max operating temperature:**
120°C
- **Compatible line coatings**
Polypropylene
- **Min preheat temperature**
170°C -180°C
- **Recommended pipe preparation**
SA 2½
- **Soil stress restrictions**
None
- **Performance**
ISO 21809-3 compliant

Product Construction

	HTLP-PP/1-2
• Backing (as supplied)	0.75 mm
• Backing (fully free recovered)	1.00 mm
• Adhesive (as supplied)	2.00 mm

Product Properties

Properties	Test Method	Typical Value
Backing		
Tensile Strength	ASTM D-638	35 MPa
Elongation at break	ASTM D-638	610%
Elongation at break after heat aging @ 150°C, 4 weeks	ASTM D-638	566%
Hardness Shore D	ASTM D-2240	56
Hot modulus @ 100%, elongation	ASTM D-638	0.16 MPa @ 180°C
Dielectric strength	ASTM D-149	37 Kv/mm
Weathering followed by elongation at break	ASTM D2565, D638	327%
Water absorption	ASTM D-570	0.28% @ 95°C, 24 hrs
Adhesive		
Melting point	ASTM D-3418	154°C
Lap shear strength	ISO 21809-3 @ 10 mm/min.	7.20 N/mm ² @ 23°C 1.27 N/mm ² @ 110°C 0.99 N/mm ² @ 120°C
Sleeve		
Peel	ISO 21809-3	6.90 N/mm @ 23°C 3.10 N/mm @ 110°C 2.40 N/mm @ 120°C
Cathodic disbondment	ASTM G42 ISO 21809-3	7 mm @ 95°C, 30 days 10 mm @ 95°C, 28 days
Resistance to shear load	TP206 120°C for 24 hrs	< 0.1 mm of displacement
Soil stress test	EMM 2/15/00	Pass 100 cycles @ 110°C
Impact resistance	ISO 21809-3	> 8 J/mm
Indentation resistance	ISO 21809-3, 10 N/mm ² @ 110°C	1 mm, remaining coating thickness
Hot water immersion Followed by peel to primed steel	MF 94-0290-REV1 HWI 90°C, 100 days 23°C	5.76 N/mm

Ordering Information

HTLP-PP type products are available as a total system. The system includes:

The Sleeve

- as uni-sleeve with chamfered edges and with pre-attached closure patch ⁽¹⁾. Installation accessories must be ordered separately.

Select sleeve width that will overlap on to the polypropylene line coating by 50 mm on each side of the weld joint.

Take into account a 5% shrinkage of sleeve width during installation when calculating the minimum sleeve width.

Epoxy

S1401 Epoxy Brush bulk (18L pails), twin packs (170 ml) or kits (0.5L kits) two component epoxy onto bare steel.

Installation accessories

- EQ-CLAMP-COIL: induction coil for specific pipe diameter and sleeve width. Contact your Covalece representative for more information.
- EQ-GENERATOR-IHG-120-WITH-CABLE: generator for induction coil. Contact your Covalece representative for more information.
- EQ-HEAT-SHIELD-150X3X25M: to protect the PP line coating while preheating the steel area.
- EQ-TO-KIT-BN60-1.5MM: torch with specific nozzle opening. Contact your Covalece representative for more information.

HTLP-PP - 10750 X 17/1-2 /UNI

Thickness code	/1-2
Sleeve width	17.75 - 20.25 inch (450-5140 mm) ⁽²⁾
Outside pipe diameter	2.375 - 48.000" (DN1200)
Product Type	HTLP-PP

(1) HTLP-PP is not sold in roll form, only pre-cut uni-sleeves. (2) Nominal width. Other widths available on request.



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