



# HTLP80-OS

## Wrap-around Sleeve & Epoxy System

The most widely used girth weld protection system for three-layer coated pipes for offshore application.



Market	Application	Temperature Range	Performance
Oil and Gas Pipelines	Bends, Elbow, Fittings and T's Girth Weld Pipeline Rehabilitation Field Applied (ODT)	up to 85°C (185°F)	EN 12068 Class C60 UV Class C80 UV

### System Description

**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 **PCI** (Permanent Change Indicator).

HTLP80-OS is an application process derivative of HTLP80 where the Liquid Epoxy is force cured for application benefits offshore. The HTLP80-OS system is a wrap-around heat-shrinkable sleeve which replicates the structure and performance of mill-applied three-layer PE coatings. HTLP80-OS also has excellent compatibility and has been extensively used on many other mill-applied coatings (see below). By far the majority of the girth welds

worldwide on three-layer coated pipes, diameters up to 100" (DN2500), have been coated with HTLP80. During installation, the epoxy is applied to the prepared pipe surface and force cured prior to application of the heat shrink sleeve. The radiation cross-linked outer layer forms a tough barrier against mechanical damage and moisture transmission.

### Product Advantages

- **Fully resistant to shear forces induced by soil and thermal movements**  
The HTLP is tough & lasts as long a 3-layer, mill-applied coating.
- **Sleeve applied over post cured liquid epoxy**  
Allows fast application, combined with high performance!
- **Superior cathodic disbondment and hot water immersion resistance.**  
Offers the optimum barrier protection against corrosion.

- **Fully reconstructs the coating of three-layer coated pipes**  
Thus, the HTLP allows the pipeline to have a virtually monolithic coating system.
- **Dimpled backing provides a "permanent change" indicator for application of heat**  
Ensures correct application heat & allows easy post-heat inspection. Reliable inspectability at any time.

### Product Selection Guide

- **Max operating temperature**  
85°C (185°F)
- **Compatible line coatings**  
PE, FBE, Coal Tar, DFBE
- **Min preheat temperature**  
70°C (158°F)
- **Recommended pipe preparation**  
SA 2½
- **Soil stress restrictions**  
None
- **Performance**  
EN 12068  
Class C60 UV  
Class C80 UV

### Product Construction

	/B	/1.2-1	/1.4-1	/1-1.5	/C	/1.5-1.7
• <b>Backing (as supplied)</b>	0.75 mm (0.030 in.)	0.90 mm (0.035 in.)	1.04 mm (0.041 in.)	0.75 mm (0.030 in.)	1.04 mm (0.041 in.)	1.10mm (0.043 in.)
• <b>Backing (fully free recovered)</b>	1.00 mm (0.039 in.)	1.20 mm (0.047 in.)	1.40 mm (0.055 in.)	1.00 mm (0.039 in.)	1.40 mm (0.055 in.)	1.50 mm (0.060 in.)
• <b>Adhesive (as supplied)</b>	1.00 mm (0.039 in.)	1.00 mm (0.039 in.)	1.00 mm (0.039 in.)	1.50 mm (0.060 in.)	1.50 mm (0.060 in.)	1.70 mm (0.067 in.)

DS-HTLP8-OS-REVI-MAR12 - AARPS-0337

## Product Properties

Properties	Test Method	Typical Value
<b>Backing</b>		
Tensile Strength	ASTM D-638	3300 psi (22.8 MPa)
Elongation	ASTM D-638	600%
Hardness, Shore D	ASTM D-2240	55
Shrink Force	ASTM D-638, 150°C (302°F)	40 psi
Dielectric strength	ASTM D-149	900 volts/mil (35 Kv/mm)
Moisture absorption	ASTM D-570	0.04%
<b>Adhesive</b>		
Softening Point	ASTM E-28	120°C (248°F)
Lap Shear	ASTM D-1002	750 psi @ 23°C (73°F) 65 psi @ 80°C (176°F)
	EN 12068, @ 10 mm (0.40 in.)/min.	0.19 N/mm <sup>2</sup> @ 80°C (176°F)
<b>Sleeve</b>		
Peel to Steel	ASTM D-1000 EN 12068, @ 10 mm (0.40 in.)/min.	40 lbs/in. width 7.7 N/mm
Cathodic disbondment	EN 12068, 28 days	1 mm @ 23°C (73°F)
Hot water immersion	ASTM D-870, 120 days	no delamination, no blisters or water ingress, @ 80°C (176°F)
Soil stress creep resistance	TP-206 80°C (176°F)	0.003 mm (0.0001 in.)
Low temperature flexibility	ASTM D-2671-C	-25°C (-13°F)
Impact resistance	ASTM G-14 EN 12068, class C	95 in-lbs > 15 Nm*
Penetration resistance	ASTM G-17, @ 80°C EN 12068, class C	no holidays @ 10,000 volts > 0.6 mm * @ 80°C (176°F)

\*Construction/1-1.5 or thicker

## Ordering Information

### HTLP type products are available:

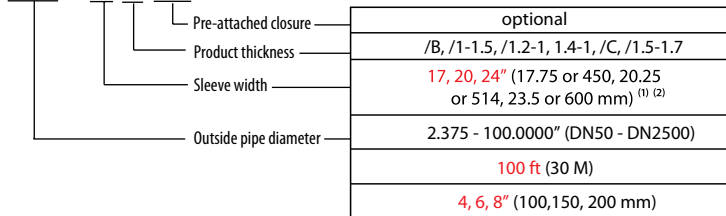
- as cut piece (pre-cut sleeve with separate closure patch)
- as Uni-sleeve (pre-cut sleeve with pre-attached closure patch)
- as a roll (closure patches to be ordered separately)



Min. Sleeve Width = (Bare Steel Dimension + 50 mm (2") on each side of the fieldjoint) + 10%

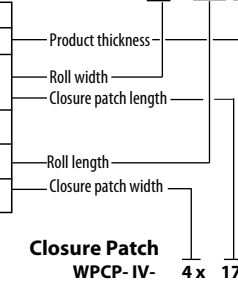
### Cut piece / Unisleeve

H7LP80 - 16000 x 17 /B (UNI)



### Roll Form <sup>(3)</sup>

H7LP80 - 20 x 100 / 1-1.5 - RL



Closure Patch  
WPCP- IV- 4 x 17

(1) nominal width - (2) not standard in all countries - (3) closure patches to be ordered separately

Sleeve cut lengths and appropriate closure patch widths depend on the pipe size and product construction, see latest application table AT-GIRTHWELD. For proper product installation, see latest installation instruction.

HTLP type products are installed with epoxy primer: H7LP80-OS is installed with S1401 primer.

Epoxy Primers are ordered separately. For more ordering information on epoxy primers see latest DS-S1401.

As field application of primers may vary, consult a Berry Plastics CPG Representative or Authorized Distributor for rate of coverage guidance.



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