



One-Piece Heat-Shrinkable Sleeve for Corrosion Protection of Girth Weld Joints on Various Types of Piping Systems

Product Description

TPS field joint coating and sealing

Construction: two-layer system

First layer: visco-elastic mastic sealant

Second layer: thick-walled, radiation-cross-linked, high density polyethylene

TPS are heat-shrinkable, tubular sleeves which prevent corrosion of welded pipe joints in distribution lines for sizes up to 8.625"/DN200. For larger sizes, the use of the Covalence wraparound sleeve, WPC, is recommended. This mechanically strong and flexible sleeve is compatible with all standard pipeline coatings and outer jackets.

The installation is carried out directly on the cleaned and dried (pre-heated) pipe surface without primer. Heat is applied to the sleeve, which shrinks to form a tight fit around the joint. While shrinking, the visco-elastic sealant homogeneously flows to cover the complete surface and fills in all surface irregularities.

Product Features / Benefits

- **Dimpled backing provides a "Permanent Change Indicator" (PCI) for application of heat**
Ensures correct application of heat & allows easy post-heat inspection. Reliable inspectability at any time.
- **No primer required**
Saves installation time.
- **Low preheat sensitivity & proven functionality**
Allows easy application combined with high functional performance. Saves installation time.
- **Specially formulated sealants**
Ensures a strong bond & a tight seal. Provides high peel and shear values after installation.
- **No special equipment or skills required**
Makes installation fast and easy. Keeps installation costs low.

Product Selection Guide

	TPS
Max Operating Temperature	45°C (113°F)
Compatible Line Coatings	PE, FBE, Tape, Coal tar
Min Preheat Temperature	60°C (140°F)
Recommended Pipe Preparation	Clean, dry and free of grease
Soil Stress Restrictions	moderate
Performance	EN12068 class B30

Product Thickness

	TPS
Backing (as supplied)	0.030 in. (0.75 mm)
Backing (fully free recovered)	0.039 in. (1.0 mm)
Adhesive (as supplied)	0.030 in. (0.75 mm)

Product Properties: TPS -TPSM/87 - TPSM-C30

Property	Test method	TPS	Typical value
Backing			
Tensile strength	ASTM D-638		3300 psi 22.8 MPa
Elongation	ASTM D-638		600%
Hardness, Shore D	ASTM D-2240		55
Shrink fo rce	ASTM D-638 150°C (302°F)		40 psi
Water absorption	ISO 62		0.05%

Adhesive		
Softening point	ASTM E-28	90°C (194°F)
Shear strength	ASTM D-1002	35 psi
	EN12068 @ 10 mm (0.4") /min.	0.22 N/mm ²
Sleeve		
Peel strength	ASTM D-1000	14 lbs/in.width
	EN12068 @ 10 mm (0.4") /min.	1.6 N/mm
Impact resistance	ASTM G-14	50 in-lbs
	EN12068	> 8 Nm
Penetration resistance	EN12068	
	class B30 (1N/mm ²)	> 0,6 mm *
	class C30 (10N/mm ²)	
Cathodic disbondment	EN12068	8 mm radius
	30 days	

* Remaining thickness

Ordering Information

TPS type products are available:

- as ready-to-size tubular sleeves

Drawing sleeve width, pipe diameter

Take a 10% shrinkage during installation of sleeve width into account when calculating the minimum sleeve width.

Example: TPS-4500x18

TPS		
4500	Nominal pipe diameter	2.375 (DN50)
	In mils	20.000 (DN400)
18	Sleeve width	
	In inches	18" (460 mm)

* For pipe sizes exceeding DN200, the use of wraparound WPC sleeves is recommended.

DS-TPS-REV1-SEP10-LEXP0026



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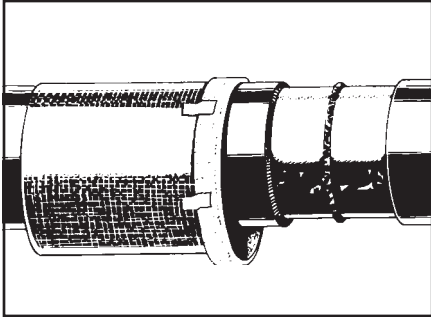
Materials and equipment

1. Appropriate size TPS sleeve
2. Hose and torch
3. Propane gas tank, regulator and gauge
4. Standard safety equipment such as gloves, goggles, hard hat, etc.

Installation has to be done according to local government regulations and usual safety precautions.

For proper selection of joint protection materials, see Product Selection Guide or contact your local Sales Engineer.

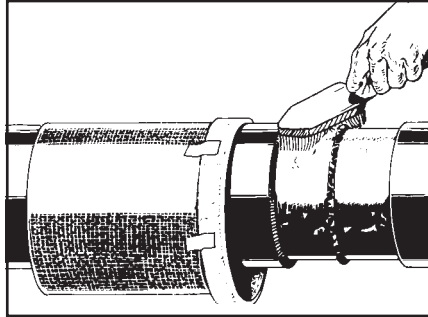
Installation instruction



1. Before making the weld, slide the TPS over the pipe end, about 12 inches (300 mm) from the weld area.

Note:

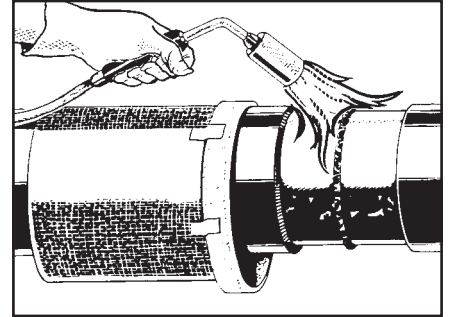
Subsequent removal of the release film from the TPS sleeve on the pipe is easier if the release film has been loosened before the sleeve is placed on the pipe.



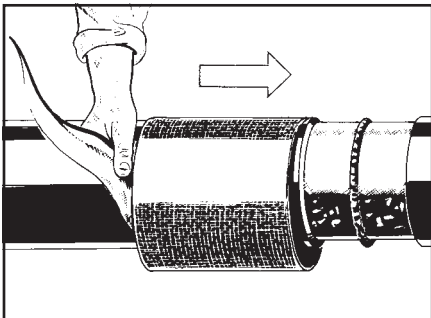
2. Clean the weld area with a hand or power wire brush to remove rust, dirt, weld splatter, and foreign materials.* Also, clean adjacent pipe coating that will be covered by the sleeve.

***Note:**

Coal tar - remove the outer paper wrap 6 inches (150 mm) adjacent to the cutback to expose coal tar.
Painted coatings - remove the whitewash paint on the surface of coating to be covered by the sleeve.



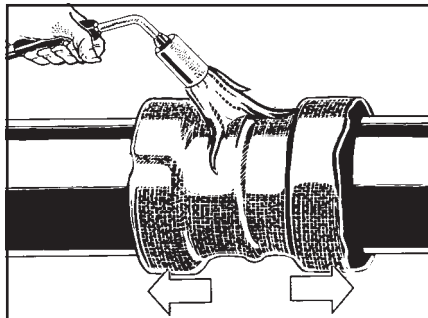
3. Preheat the joint until hot to the hand approximately 140°F (60°C) minimum.



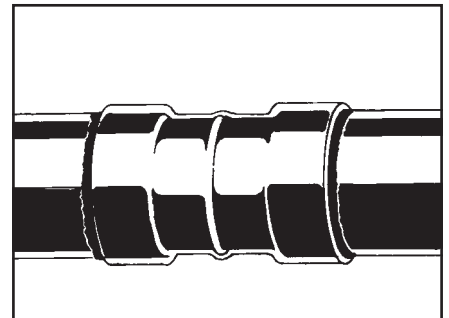
4. Remove the inner protective release film of the sleeve. Center the sleeve over the preheated joint, allowing a 2-inch (50 mm) overlap on the mill coating.

Note:

Adjust the flame to approximately 20 inches (500 mm), 6 psi regulator setting. The desired flame should be approximately 1/3 blue cone and 2/3 visible yellow.



5. Heat the sleeve, beginning in the center. Start at the bottom and move upward on both sides. Work to one end, then to the other as shrinkage occurs. Keep the torch moving and apply heat evenly around the sleeve until the pattern on the backing has disappeared and the backing has a smooth surface. During shrinkdown occasionally check mastic flow with gloved finger. Wrinkles should disappear automatically.



6. The sleeve is fully recovered when all of the following have occurred:

- There are no cold spots on the sleeve surface.
- The weld-bead profile is visible on the sleeve.
- After the sleeve is cool, mastic flow is evident on both edges.
- The pattern on the backing has disappeared and the backing has a smooth surface.