



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

Product Description

TPS, TPSM 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(M) 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 CovalenceRaychem® 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 (TPS) 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.
- **Mechanically strong & resists abrasion, impact and penetration**
Reliable and tough. Remains user-friendly (even at low temperatures).
- **Specially formulated sealants**
Ensures a strong bond & a tight seal. Provides high peel and shear values after installation.
- **Sealing adhesive automatically flows and repairs minor mechanical damages**
"Self-healing effect". Saves time.
- **No special equipment or skills required**
Makes installation fast and easy. Keeps installation costs low.

Product Selection Guide

	TPS/11	TPSM/87	TPSM-C30
Max Operating Temperature	45°C (113°F)	50°C (122°F)	30°C (86°F)
Compatible Line Coatings	PE, FBE, Tape, Coal tar	PE, FBE, Tape, Coal tar and Asphalt	PE, FBE, PP, Tape, Coal tar and Asphalt
Min Preheat Temperature	60°C (140°F)	60°C (140°F)	60°C (140°F)
Recommended Pipe Preparation	Clean, dry and free of grease	Clean, dry and free of grease	Clean, dry and free of grease
Soil Stress Restrictions	moderate	moderate	moderate
Performance	EN12068 class B30	EN12068 class B30	EN12068 class C30

Product Thickness

	TPS	TPSM/87 TPSM-C30
Backing (as supplied)	0.030 in. (0.75 mm)	0.039 - 0.063 in. (1.0 - 1.6 mm)
Backing (fully free recovered)	0.039 in. (1.0 mm)	0.047 - 0.091 in. (1.2 - 2.3 mm)
Adhesive (as supplied)	0.030 in. (0.75 mm)	0.028 - 0.039 in. (0.7 - 1.0 mm)

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

Property	Test method	TPS	TPSM/87 Typical value	TPSM-C30
Backing				
Tensile strength	ASTM D-638	3300 psi 22.8 MPa	3000 psi 20 MPa	3000 psi 20 MPa
Elongation	ASTM D-638	600%	580%	580%
Hardness, Shore D	ASTM D-2240	55	55	55
Shrink fo rce	ASTM D-638 150°C (302°F)	40 psi	40 psi	40 psi
Water absorption	ISO 62	0.05%	0.05%	0.05%

Adhesive				
Softening point	ASTM E-28	90°C (194°F)	94°C (201°F)	134°C (273°F)
Shear strength	ASTM D-1002	35 psi		
	EN12068 @ 10 mm (0.4")/min.	0.22 N/mm ²	0.18 N/mm ²	0.07 N/mm ²
Sleeve				
Peel strength	ASTM D-1000	14 lbs/in.width		
	EN12068 @ 10 mm (0.4")/min.	1.6 N/mm	0.3 N/mm	1.9 N/mm
Impact resistance	ASTM G-14	50 in-lbs		
	EN12068	> 8 Nm	> 8 Nm	> 15 Nm
Penetration resistance	EN12068			
	class B30 (1N/mm ²) class C30 (10N/mm ²)	> 0,6 mm *	> 0,6 mm *	2.5 mm *
Cathodic disbondment	EN12068	8 mm radius	10 mm radius	4 mm radius
	30 days			

* Remaining thickness

Ordering Information

TPS(M) 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 / TPSM-150/104-450/87 / TPSM-C30-DN100-500

		TPS	TPSM/87	TPSM-C30
C30	Performance classification			C30
	Nominal pipe diameter	2.375 (DN50)	32/18 (1.26"/0.71")	N/A
4500	In mils	20.000 (DN400)	45/24 (1.77"/0.95")	N/A
DN100	In DN		61/37 (2.40"/1.46")	DN50 (2.375")
150/104	Recovery ratio in mm (supplied diameter / recovered diameter)		80/55 (3.15"/2.17")	DN80 (3.500")
			150/104 (5.91"/4.10")	DN100 (4.500")
			196/153 (7.72"/6.02")	DN150 (6.625")
		255/150 (10.04"/5.91")	DN200 (8.625")	
	Sleeve width			
18	In inches	18" (460 mm)	350 mm (14") (< 80/55)	370 mm (14.5") (DN25 - 50)
450	In mm		450 mm (17.75") (80/55 - 196/153)	450 mm (17.75") (DN80 - 150)
500	In mm		600 mm (23.50") (255/150)	600 mm (23.50") (DN200)

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

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