

TS60 tubular heat shrink sleeve



Description:

TS60 tubular sleeve is designed for corrosion protection of girth weld joint of buried and exposed steel pipes, especially for 3-layer coated oil and gas pipeline.

Construction: 3-layer system

First layer: Liquid epoxy primer, solvent-free two-component.

Second layer: High shear strength hot-melt copolymer adhesive.

Third layer: Radiation cross-linked, high density polyethylene backing.

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.
- 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 backing properties:

Property	Unit	TS60 (2PE)	TS60 (3PE)	Test according
Tensile Strength	psi	2700	2700	ASTM D638
Ultimate Elongation	%	650	650	ASTM D638
Volume Resistivity	Ω-cm	1x10 ¹⁶	1x10 ¹⁶	ASTM D257
Dielectric Strength	kV/mm	20	20	ASTM D149
Water Absorption	% Wt	0.05	0.05	ASTM D570

Softening Point	°C	90	103	ASTM E28
Peel Strength	N/cm ²	60	70	DIN EN12068
Lap Shear Strength	N/cm ²	140	300	DIN EN12068
Impact Resistance	J	>15	>15	DIN EN12068
Penetration Resistance	-	Pass	Pass	ASTM G17
Cathodic Disbondment	mm-radius	<15mm	<15mm	DIN EN 12068

Adhesive properties:

No.	Item	Index	Test according
1	Softening point (ball and ball method) 50°C	≥ 90 °C	GB/T4507
2	Softening point (ball and ball method) 70°C	≥ 110 °C	GB/T4507
3	Embrittlement temperature (°C)	≤ -15	SY/T0413-2002
4	Lap shear strength (MPa) (23°C)	≥ 1.0	GB/T7124
5	Peel strength (N/cm) (Cohesive destruction)	Heat shrinkable tape/polyethylene layer 23±2°C /50±2°C	≥ 70 ≥ 15
		Heat shrinkable tape/epoxy primer steel 23±2°C /50±2°C	≥ 70 ≥ 15
		Heat shrinkable sleeve (belt)/steel 23±2°C /50±2°C	≥ 70 ≥ 15

Primer properties:

No.	Item	Index	Test according
1	Thickness (wet film) (um)	≥ 100	Measured
2	Adhesion (level)	≤ 2	SY/T0315-97 Appendix H
3	Cathodic stripping (65°C,48h) (mm)	≤ 10	SY/T0413-2002 Appendix B
4	Shear strength after curing (MPa)	≥ 5.0	SY/T0041

Product selection guide:

	TS50 (mastic)	TS 60	TS 80
Max operating temperature	60°C	70°C	85°C
Compatible line coatings	PE, FBE, PP	PE, FBE, PP	PE, FBE, PP
Preheat temperature	60°C	70°C	85°C
Recommended pipe preparation	Clean, dry and free of grease	Clean, dry and free of grease	Clean, dry and free of grease
Performance	SY/T0413-2002 EN12008	SY/T0413-2002 EN12008	SY/T0413-2002 EN12008

Ordering information:

TS type products are available:
 •as ready-to-size tubular sleeves



•Select sleeve width that will overlap onto the mill-applied coating by 2 inches (50 mm) minimum on each side of the weld joint. Take a 10% shrinkage during installation of sleeve width into account when calculating the minimum sleeve width.

Range for available dimension:

Sleeve Diameter	Suitable for different pipe diameters from DN15 to DN1500
Sleeve width	Standard width is 500mm. Other widths against request
Backing thicknesses	1.2mm or 1.5mm, according to pipe diameter.
Adhesive thicknesses	0.8mm or 1.0mm, Customized thicknesses are available on request.

Application table: (All dimensions are in mm)

Pipe Diameter	Outside Pipe	Sleeve Diameter	Sleeve Width	Backing / Adhesive thickness
50	60.0	100	500	≥1.2/0.8
65	73.0	110	500	≥1.2/0.8
80	88.9	120	500	≥1.2/0.8
	101.6	140	500	≥1.2/0.8
100	114	150	500	≥1.2/0.8
125	141	190	500	≥1.2/0.8
150	159	200	500	≥1.2/0.8
	168	208	500	≥1.2/0.8
200	219	250	500	≥1.2/0.8
250	273	320	500	≥1.2/0.8
300	325	370	500	≥1.2/0.8
350	355	400	500	≥1.2/0.8
400	406	460	500	≥1.2/0.8
	426	470	500	≥1.5/0.8
450	457	510	500	≥1.5/0.8
500	508	560	500	≥1.5/0.8
550	558	610	500	≥1.5/0.8
600	610	660	500	≥1.5/0.8
650	660	710	500	≥1.5/0.8
700	711	770	500	≥1.5/0.8
750	762	820	500	≥1.5/0.8
800	812	860	500	≥1.5/0.8

850	863	910	500	≥1.5/0.8
900	914	960	500	≥1.5/0.8
950	965	1020	500	≥1.5/0.8
1000	1016	1060	500	≥1.5/0.8
1050	1066	1110	500	≥1.5/0.8
1100	1117	1170	500	≥1.5/0.8
1150	1168	1210	500	≥1.5/0.8
1200	1219	1270	500	≥1.5/0.8
1250	1270	1320	500	≥1.5/0.8
1300	1320	1380	500	≥1.5/0.8
1350	1371	1420	500	≥1.5/0.8
1400	1422	1470	500	≥1.5/0.8
1450	1473	1530	500	≥1.5/0.8
1500	1527	1580	500	≥1.5/0.8

Service Life: More than 30 years

Normal Packing: Carton (Maximum 45kg)

Storage Condition:

- To ensure maximum performance, Dasheng products in a dry, ventilated area.
- Keep products sealed in original cartons and avoid exposure to direct sunlight, rain, snow, dust or other adverse environmental elements.
- Avoid prolonged storage at temperatures above 40°C or below -20°C.
- Product installation should be done in accordance with local health and safety regulations.

Shelf Life: 2 years, under correct storage condition.

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