

## PREMIER™ 50 ST HEAT SHRINK SLEEVE With Thermal Indicator

### Description

Premier™ 50 ST Heat Shrink Sleeve (with indicator) consists of a crosslinked and stabilised polyethylene backing, coated with a butyl rubber adhesive.

### Uses

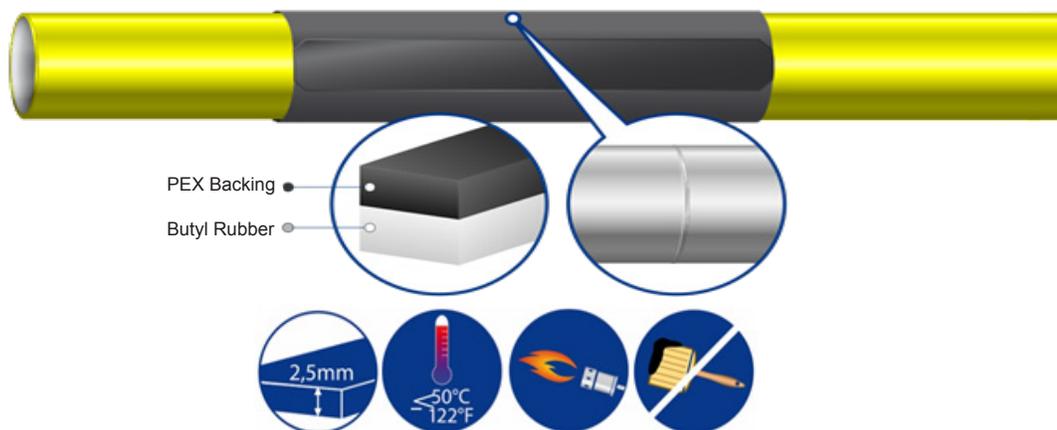
Used for the protection of welded seams on buried or immersed pipelines of low alloy ferrous material and can be applied on site. Other site applications include the repair of mechanical defects in PE or PP factory coatings.

### Features

- Compliant to AS 4822 (Type 2A-1) and ISO 21809-3 (Type 14A-1).
- Compliant to ANSI/AWWA C216-15.
- Warm-applied.
- Low water vapour and oxygen permeability.
- Compatible with factory coatings of polyethylene, polypropylene, epoxy, polyurethane and bitumen.
- The surface pattern of the sleeve contains a thermal indicator. With sufficient heat, the surface becomes smooth.

### Application

Refer to Premier™ 50 ST Heat Shrink Sleeve Application Instructions.



**Denso**®

# Premier™ 50 ST Heat Shrink Sleeve

## Property Specifications

PROPERTIES	TEST METHOD	VALUE
Maximum Service Temperature		50°C
Backing Thickness		1.0 mm
Butyl Adhesive Thickness		1.5 mm
Total Thickness		2.5 mm
Tape Strength	DIN EN 12068	30 MPa
	ASTM D1000	15 MPa
	ASTM D638-14	15.5 MPa
Elongation at Break	DIN EN 12068	600%
	ASTM D1000	790%
	ASTM D638-14	>470%
Hardness	DIN 53505 / ISO 868	45 Shore D
Water Absorption	DIN EN ISO 62 / ASTM D570	0.08%
Water Vapour Transmission	ASTM E96	0.031 g/h.m <sup>2</sup>
Permeance	ASTM E96	5.92 x 10 <sup>-9</sup> g/Pa.m <sup>2</sup> .s
Shrinking Rate	15 min, 180°C, free shrinking	25%
Chemical Resistance	24 h Storage at 23°C	0.1 N NaOH 0.1 N Na <sub>2</sub> SO <sub>4</sub> 0.1 N H <sub>2</sub> SO <sub>4</sub> 0.1 N HCl
Impact Resistance	AS 4822	15 J
	DIN EN 12068	16 J
	ISO 21809-3	5.7 J/mm
	ASTM G14	15.4 ± 0.4 J
Indentation Resistance at 23°C	DIN EN 12068	10 N/mm <sup>2</sup> (pressure)
	ISO 21809-3	1.0 mm (residual thickness)
Indentation Resistance at 50°C	DIN EN 12068	10 N/mm <sup>2</sup> (pressure)
	ISO 21809-3	0.8 mm (residual thickness)
Specific Electrical Insulation Resistance	DIN EN 12068 / ISO 21809-3	10 <sup>10</sup> ohm.m <sup>2</sup>
Volumetric Resistivity	ASTM D257-14	2.00 x 10 <sup>16</sup> ohm.cm
Dielectric Breakdown	ASTM D149	19.5 kV/mm
Heat Shock (Backing, 200°C, 4 h)	AWWA C216-15	Pass
Cathodic Disbondment, 28 days	DIN EN 12068 / ISO 21809-3	10 mm @ 50°C
	AS 4822 / AS 4352-2005	≤ 10 mm (6.7 mm average)
	22.5°C ± 2.5°C, Test Cell B	
	ASTM G8-96 (22.5°C)	≤ 3.4 mm
Peel Strength, Layer to Layer @ 100 mm/min	DIN EN 12068 / ISO 12068-3	2.0 N/mm (23°C), 0.3 N/mm (50°C)
Peel Strength, Layer to Layer @ 300 mm/min	ASTM D1000	5.0 N/mm (23°C), 1.0 N/mm (50°C)
Peel Strength		
On Pipe Surface @ 10 mm/min	DIN EN 12068 / ISO 21809-3	1.0 N/mm (23°C), 0.2 N/mm (50°C)
On Factory Coating @ 10 mm/min	DIN EN 12068 / ISO 21809-3	1.0 N/mm (23°C), 0.2 N/mm (50°C)
On Pipe Surface @ 100 mm/min	AS 4822	≥ 6.5 N/mm (23°C), 1.3 N/mm (50°C)
On Pipe Surface @ 300 mm/min	ASTM D1000	10.0 N/mm (23°C), 1.0 N/mm (50°C)
Lap Shear Strength		
On Steel @ 10 mm/min	DIN EN 12068 / ISO 21809-3	0.10 N/mm <sup>2</sup> (23°C), 0.06 N/mm <sup>2</sup> (50°C)
On Steel @ 50 mm/min	AWWA C216-15	0.14 N/mm <sup>2</sup> (23°C)
On Factory Coating @ 10 mm/min	DIN EN 12068 / ISO 21809-3	0.13 N/mm <sup>2</sup> (23°C), 0.05 N/mm <sup>2</sup> (50°C)
On Factory Coating @ 1.3 mm/min	ASTM D1002	0.06 N/mm <sup>2</sup> (23°C), 0.03 N/mm <sup>2</sup> (50°C)
On Factory Coating @ 50 mm/min	AWWA C216-15	0.22 N/mm <sup>2</sup> (23°C), 0.08 N/mm <sup>2</sup> (50°C)

The information given on this sheet is intended as a general guide only and should not be used for specification purposes. We believe the information to be accurate and reliable but do not guarantee it. We assume no responsibility for the use of this information. Users must, by their own tests, determine the suitability of the products and information supplied by us for their own particular purposes. No patent liability can be assumed.

# PRODUCT DATA SHEET

## Packaging

Premier™ 50 ST Heat Shrink Sleeve is available in 30 m length roll with a width of 450 mm and 600 mm.

Roll Dimension	Box Dimension (mm)	Area per Roll (m <sup>2</sup> )	Weight per Roll (kg)
450 mm x 30 m	360 x 360 x 460	13.5	39
600 mm x 30 m		18.0	51

Prepared on nominal width (from DN 80 to DN 1000), with separate or fixed closing strip, width 450 mm, 600 mm and 750 mm. Content and weight of selected sizes are as below.

Pipe Internal Diameter (Dimension of Sleeve)	No. of Shrinkable Sleeves in box (Dimension of Box in mm)	Weight per Box (kg)
DN 80 (450 x 410 mm)	12 (490 x 330 x 230) 80 (770 x 570 x 350 x 300)	7.0 48
DN 100 (450 x 475 mm)	12 (490 x 330 x 230) 70 (770 x 570 x 350 x 300)	8.0 48
DN 150 (450 x 655 mm)	12 (490 x 330 x 230) 70 (770 x 570 x 350 x 300)	11 64
DN 200 (450 x 800 mm)	10 (490 x 330 x 230) 63 (770 x 570 x 350 x 300)	11 69
DN 250 (450 x 975 mm)	8 (490 x 330 x 230) 56 (770 x 570 x 350 x 300)	11 75
DN 300 (450 x 1140 mm)	8 (490 x 330 x 230) 50 (770 x 570 x 350 x 300)	13 79
DN 400 (450 x 1440 mm)	8 (490 x 330 x 230) 48 (770 x 570 x 350 x 300)	16 95
DN 500 (450 x 1810 mm)	6 (490 x 330 x 230) 40 (770 x 570 x 350 x 300)	15 98
DN 600 (450 x 2100 mm)	6 (490 x 330 x 230) 35 (770 x 570 x 350 x 300)	17 99
DN 700 (450 x 2410 mm)	5 (490 x 330 x 230) 30 (770 x 570 x 350 x 300)	17 97
DN 800 (450 x 2730 mm)	4 (490 x 330 x 230) 28 (770 x 570 x 350 x 300)	15 102
DN 900 (450 x 3050 mm)	4 (490 x 330 x 230) 24 (770 x 570 x 350 x 300)	17 98
DN 1000 (450 x 3370 mm)	4 (490 x 330 x 230) 24 (770 x 570 x 350 x 300)	19 108

**Storage Temperature:** +5 to 35°C. Store in a dry, well ventilated place in original packaging.



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