

## HMS 100 Mastic Heat Shrinkable Sleeve 2-layer Girth Weld Field Joint Coatings

**HMS 100 Mastic heat shrinkable sleeve** 2-layer system are engineered for ready-to-fit assembly for the corrosion protection of field girth weld joints in water supply or gas distribution and transmission networks, especially for use in low & middle shear or low stress environments in moderate climates.

**Construction:** Two-layer system

**First layer:** Visco-elastic butyl based adhesive

**Second layer:** Radiation cross-linked, high density polyethylene backing with **TIP** (Temperature Indicator Pattern)

HMS100 is compatible with most commonly used steel pipe coatings and is used for offshore and onshore girth weld protection or to recoat (rehabilitate) long pipe sections and large radius bends. The installation is carried out directly on the cleaned and pre -heated pipe surface without any primer required. During installation, the heat shrinkable sleeve is wrapped around and shrunk to form a tight fit around the joint. During recovery, the adhesive softens and flows to form a perfect bond with the pipe surface providing protection against corrosion. The radiation cross-linked outer layer forms a tough barrier against mechanical damage and moisture transmission.

### FEATURES & BENEFITS

- Excellent visco-elastic adhesive allow for lower installation pre-heat temperature and super bonding to coating, offer fully resistant to shear forces induced by soil and thermal movements.
- Superior cathodic disbondment and offers the optimum barrier long term protection against corrosion.
- Easy field installation, saves time & cost, HMS100 can be installed quickly and easily in most environments.
- Pattern backing provides a “heating temperature indicator” for application of heat. Ensures correct application heating.
- Covers a wide range of operating temperature ratings from -45°C to 100°C, offers a solution for nearly every application.

### APPLICATION GUIDE

HMS 100		Product Thickness		
Performance	EN 12068	Pipeline diameter (inch)	Mastic Sealant (mm)	Total Thickness as supplied (mm)
Compatible line coatings	PE, FBE, Coal Tar, AE	3-10	0.8	1.8
Soil stress restriction	None	12-30	1.2	2.2
Max operating temperature	80°C, For offshore applications max.operating temperature 100°C	Above pipe diameter DN750 (30") in high shear and high stress environments, the use of HCS 100, HSS80C is recommended.		
Min preheat temperature	50 °C			
Recommended pipe preparation	St2.0 ~ St3.0 or SA2 ½			

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### STANDARD ORDERING OPTIONS

Cut Piece		*Roll form (Closure patches to be ordered separately)	
<b>Example</b>	HMS 100-12X18/1.8	<b>Example</b>	HMS 100-20X100f/2.2-RL
<b>30</b>	Operating temperature up to 80°C	<b>65</b>	Operating temperature 80°C
<b>12</b>	Outside pipe diameter in inch	<b>100f</b>	Roll length in feet
<b>18</b>	Sleeve width in inch	<b>20</b>	Roll width in inch
<b>/1.8</b>	Sleeve thickness in mm	<b>2.2</b>	Roll thickness in mm
		<b>-RL</b>	Supplied in rolls

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

### PROPERTIES

Property	Test Method	Typical Value
<b>Backing</b>		
<b>Tensile Strength</b>	ASTM D 638	22MPa
<b>Elongation to break</b>	ASTM D 638	620%
<b>Hardness, Shore D</b>	ASTM D 2240	55~57
<b>Dielectric Strength</b>	ASTM D 149	>30KV/mm
<b>Moisture Absorption</b>	ASTM D 570	0.04%
<b>Adhesive</b>		
<b>Lap Shear</b>	EN 12068 @10mm/min	0.13N/mm <sup>2</sup> @23°C 0.02N/mm <sup>2</sup> @80°C
<b>Sleeve</b>		
<b>Peel Strength</b>	EN 12068 @10mm/min ASTM D 1000 @300mm/min	1.3N/mm@23°C 55pli@23°C
<b>Cathodic Disbondment</b>	EN 12068, @23°C 28 days, @80°C	10 mm radius 14 mm radius
<b>Hot Water Immersion</b>	ASTM D 870 120 days, @80°C	No delamination. no blisters or water ingress
<b>Low Temperature Flexibility</b>	ASTM D 2671-C	-35°C
<b>Impact Resistance</b>	EN12068, Class C	15J no holiday

**Service Life:** More than 30 years

**Normal Packing:** Carton (Maximum 45kg).

**Storage Condition:**

- To ensure maximum performance, store Guardian 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.

All statements and data presented herein are given in good faith and believed to be appropriate and reliable. It is given without express or implied warrant or guarantee. Potential users of Guardian's materials are urged to conduct confirmatory trials to satisfy themselves as to the suitability of the selected product for their particular end use prior to purchase.