2Layer-Primerless Wraparound Sleeves

Corrosion resistant field ring weld coating system

Features

- Low application warm-up
- Excellent aging resistance
- Low cathode peeling
- Impact resistance, penetration resistance
- Wide operating temperature range
- No special equipment or skills required

Our wrap-around heat shrink sleeves are a primer-free, corrosion-resistant, ready-to-use solution designed to provide anti-corrosion protection for on-site circumferential welds in water supply, gas distribution, and transmission pipelines. These sleeves are ideal for mid-to-low shear or low-stress applications in temperate climates.

Description

The product consists of a low-heat adhesive and a radiation-crosslinked HDPE backing. It is available as a single unit with an closure plate or as loose two-piece rolls with independent closure plates. This versatile coating is suitable for steel surfaces and compatible with a variety of pipeline coatings, including polyethylene (PE), polypropylene (PP), fused epoxy resin (FBE), polyurethane (PU), adhesive tapes, coal tar, asphalt, and others.

Properties	2LWS 30 MA	2LWS 50 MA	2LWS 65 MA	Test Method
Max Operating Temperature	30°C (86°F)	50°C (122°F)	65°C (149°F)	-
Min. Preheat Temperature	50°C (122°F)	50°C (122°F)	50°C (122°F)	-
Backing/Black				
Elongation at Break	580%	600%	600%	ASTM D638
Tensile Strength at Break	3191psi (22MPa)	3000psi (20.7MPa)	3300psi (22.8MPa)	ASTM D638
Hardness, Shore	54 Shore D	52 Shore D	55 Shore D	ASTM D2240
Specific Gravity	0.96g/cm³	0.97g/cm³	0.94g/cm³	ASTM D792
Dielectric Strength	32kV/mm (812.8volts/mil)	27.6kV/mm (701volts/mil)	35kV/mm (900volts/mil)	ASTM D149
Water Absorption @23°C (73°F) 24hr	0.05%	0.05%	0.04%	ASTM D570
Adhesive/Black				
Softening Point	97.5°C (207.5°F)	108°C (215°F)	115°C (273°F)	ASTM E28
Lap Shear	@23°C (73°F) 33.1N/cm² (48psi)	@23°C (73°F) 30N/cm² (33.5psi)	@23°C (73°F) 34.5N/cm² (50psi)	ASTM D1002
	@30°C (86°F) 0.15N/cm² (2.18psi)	@50°C (86°F) 0.15N/cm² (2.18psi)	@65°C (86°F) 0.10N/cm² (0.13psi)	
Installed Sleeve				
Adhesion to Steel @23°C (73°F)	75N/cm (42.8lb/in)	80N/cm (45.7lb/in)	87.6N/cm (50lb/in)	ASTM D1000
Cathodic Disbondment	@30°C (86°F), 28days 6mm (0.24in)	@50°C (122°F), 28days 5mm (0.20in)	@65°C (149°F), 28days 5mm (0.20in)	ISO21809-3
Impact Resistance	15J (132.8in.lbf)	8.5J (75in.lbf)	15J (132.8in.lbf)	ASTM G14
	>7.5J/mm	>4.5J/mm	>7.5J/mm	ISO21809-3
Low Temp. Flexibility	-25°C (-13°F)	-25°C (-13°F)	-25°C (-13°F)	ASTM D2671
Product Thickness				
Backing	0.76mm (29.9mils)	0.8mm (31.5mils)	1.05mm (41.3mils)	Customizable
Adhesive	1.2mm (47.2mils)	1.2mm (47.2mils)	1.30mm (51.2mils)	
Installation Completed	≥2.2mm (86.6mils)	≥2.2mm (86.6mils)	≥2.6mm (102.4mils)	
Standard Sleeve Width	300 to 600mm (11.81 to 23.62in)			

Order Notification

* Single piece (pre-cut with closure and sealing patch)

* As a roll (the closure sheet and sealing strip need to be ordered separately)

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

Storage and Shelf Life

This product should be stored in a clean, dry, and well-ventilated indoor area, away from direct sunlight. During transportation, the same conditions must be maintained, and the product must be covered. The temperature range should not be lower than 0°C (32°F) or higher than +50°C (+122°F), with humidity not exceeding 75%. Store upright, with stacking height not exceeding five layers. The shelf life is three years (re-inspection required if exceeded).

General Requirements for Applications

General: The area to be coated has to be cleandry, and free from oil, grease and dust. All contamination including mill-scale has to be removed.

Degreasing: Degrease surfaces with Toluene or Heptane and e.g. a lint-free cloth.

Working face temperature: The operating surface temperature preheating treatment shall be executed in accordance with the corresponding description in the technical parameter table.

For uneven working surfaces, excessive correction treatment should be performed using Butyl rubber filler.

Application Instruction

Step 1

Clean the working surface to ST3 or SA2½.

Step 2

Align and calibrate according to the product wiring diagram, then preheat and bond the adhesive surface with a flame gun to form a sleeve.

Step 3

After preheating the closure piece, adhere it to the seam formed by the overlap, ensuring equal pressure on the seam by the closure piece. During the operation, use a silicone rubber roller to flatten and compact it, avoiding any air bubbles. Proceed in the same manner for Step 2.

Step 4

Perform preheating treatment on the working surface temperature according to the corresponding description in the technical parameter table. Remove the release film. At any time, use a flame to heat the middle part of the sleeve width (axial direction) of the repair collar first in a circumferential and surrounding manner. Then, heat both sides in the same way. The surface should be heated and shrunk, and it is preferable to observe minimal adhesive overflow at the overlap with the original anti-corrosion layer.

Step 5

During the installation process, adjust the uniform heating of the flame according to the operating temperature requirements to avoid bulging and wrinkling. If wrinkling or bubbling occurs during operation, treat it with silica gel roller in time to achieve flatness and compaction.

Step 6

Perform holiday detection per NACE SP0274 Handling and commissioning.

Friendly Reminder

The backfill should be kept clean and should not contain any foreign matter that could damage the coating system.

For more technical inquiries, please visit our website.

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