Wraparound Sleeves PAS

A Visco-elastic Butyl Based Adhesive Wrapping Sleeve

Features

- Low preheat sensitivity
- No asphalt content
- Heat-resistant water immersion
- No expiration date

Our Wraparound Sleeves PAS is a double-layered, wrapped heat-shrink sleeve designed to protect circumferential welds on new onshore and offshore pipelines, or to recoat (repair) long pipe sections and large-radius bends. It is highly suitable for pipelines operating at both room temperature and high temperatures.

Description

The product features a radiation cross-linked modified polyethylene backing, coated with a special formulation of visco-elastic butyl-based adhesive. This adhesive remains semi-viscous at low temperatures and is compatible with common steel pipe coatings. It exhibits excellent sealing performance, aging resistance, and cathodic disbonding resistance. No primer or special surface pretreatment is required on the steel substrate during application. Even under harsh field conditions, the installation method is simple and easy to implement, providing long-lasting corrosion protection for pipeline welds.

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.

Properties	PAS 65	PAS 85	Test Method
Max Operating Temperature	65°C (150°F)	85°C (185°F)	-
Min Preheat Temperature	60°C (140°F)	95°C (203°F)	-
Workface	Steel, PE, PP, FBE	Steel, PE, PP, FBE	-
Backing/Black			
Elongation at Break	600%	600%	ASTM D638
Tensile Strength at Break	3300psi (20.8MPa)	3480psi (24MPa)	ASTM D638
Hardness, Shore	56 Shore D	57 Shore D	ASTM D2240
Specific Gravity	0.95g/cm^3	0.95g/cm^3	ASTM D792
Dielectric Strength	35kV/mm (900volts/mil)	35kV/mm (900volts/mil)	ASTM D149
Water Absorption	0.04% @23°C (73°F) 24hr	0.04% @23°C (73°F) 24h	ASTM D570
Adhesive/Black			
Softening Point	125°C (257°F)	152°C (305.6°F)	ASTM E28
Lap Shear	@23°C (73°F) 0.35N/mm^2 (50psi)	@23°C (73°F) 0.35N/mm^2 (50psi)	ASTM D1002
	@65°C (150°F) 0.02N/mm^2 (3psi)	@85°C (185°F) 0.035N/mm^2 (5psi)	
Installed Sleeve			
Adhesion to Steel	@23°C (73°F) 85N/cm (48.5lb/in) @65°C (150°F) 28N/cm (16lb/in)	@23°C (73°F) 70N/cm (40lb/in) @85°C (185°F) 8.7N/cm (5lb/in)	ASTM D1000
Cathodic Disbondment	@65°C (150°F), 30days ≤7mm (0.28in) radius	@85°C (185°F), 30days ≤7.5mm (0.3in) radius	ISO21809,3
Hot Water Immersion	@65°C (149°F), 120 days No delamination, no blisters or water ingress	@85°C (149°F), 120 days No delamination, no blisters or water ingress	ASTM D870
Impact Resistance	10J (88.5in.lbf)	11J (97in.lbf)	ASTM G14
Low Temp. Flexibility	-15°C (5°F)	-41°C (-41.8°F)	ASTM D2671,C
Product Thickness			
Backing Thickness	1.0/1.1mm (39.4/43.3mils)	0.9/1.1mm (35.4/43.3mils)	Customizable
Adhesive Thickness	1.3/1.5mm (351.2/59mils)	1.4/1.8mm (55.1/70.9mils)	
Installation Completed	≥2.6/3.0mm (106.3/118.1mils)	≥2.5/3.2mm (98.4/126mils)	
Suitable Pipe Diameter	DN150 to 1200mm (5.9 to 47.2inch)	DN150 to 1600mm (5.9 to 63inch)	
Standard Sleeve Width	450mm (17.75inch) 600mm (23.62inch)	450mm (17.75inch) 600mm (23.62inch)	

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 (reinspection is required after the expiration date).

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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