Polyken®
Pipeline Tape Technology

PRODUCT DATA SHEET

POLYKEN® 939

Product Information

Product description: The Polyken® filler tapes are designed as an underlying filler material prior to the application of Polyken® coating systems and Covalence Heat Shrinkable Products. The elastomeric formulation is very conformable, making it ideal for filling in transition areas around tees, elbows, valves, specials, welded and coupled field joints. The filler tapes maintain flexibility over a wide temperature range and under various conditions encountered in the field.

The 939 is a thick mastic-like butyl rubber filler designed to fill and smooth transition areas. The semi-tacky composition remains flexible and is easily molded in filler to conform around irregular shapes. Polyken® 939 comes in rope or flat tape form and in a variety of thicknesses to meet almost any job requirement.

Features & Benefits:

- Flexible under various field conditions.
- Easy and simple application.
- Conformable and moldable.
- Compatible with Polyken® coating systems.

Product selection guide

Operating temperature	-40 to 121°C (-40°F to 250°F)
Recommended primer	1019, 1027, 1033A, 1039
Compatible line coatings	PE, FBE, Cold tape, CT, CTE
Recommended pipe preparation	SSA-ST2 (SSPC-SP3) or SSA-SA 2 (SSPC-SP6) 1 – 3 mil anchor profile (25 – 76 micron anchor profile)

Product construction

	939
Adhesive	See table below
Backing color	Black

Ordering information

Description	Thickness	Width	Length
939-500 Rope	10.7 mm (0.42”)	10.7 mm (0.42”)	6.6 m (21.75 ft)
939-750 Rope	15.2 mm (0.60”)	16.8 mm (0.66”)	4.4 m (14.50 ft)
939-1000 Rope	22.6 mm (0.89”)	22.6 mm (0.89”)	4.4 m (14.50 ft)
939-2000 Rope	40.6 mm (1.60”)	46.7 mm (1.84”)	2.3 m (7.4 ft)

	Rolls / Case	Cases / Pallet	Rolls / Pallet	MPF	MOQ
939-500 Rope	8	45	360	MTO	360
939-750 Rope	8	45	360	MTO	360
939-1000 Rope	6	45	270	MTS	270
939-2000 Rope	3	54	162	MTO	162

MPF: Master Planning Family
MTO: Make to Order
MTS: Make to Stock

For other ordering options please contact your Seal For Life representative.

Product properties

Property	Method	Typical values 939
Specific Gravity	ASTM D71	1.15-1.40
Solids content		Min 99 %
Cone Penetration	ASTM D 217, @ 25°C (77°F)	55 to 85
Ach content	ASASHTO T111	45-48 %
Low temperature flexibility	ASTM C765	No cracking or adhesion loss @23°C (73°F)
Elevated Temperature Flow	ASTM C765	No sag or shape change after 14 days @ 85°C (185°F)
Chemical resistance	ASTM C990	No visible deterioration ater 30 days immersion in the following solutions: - 5% NaOH - 5% HCl - 5% KOH - 5% H_2S0_4 - 5% H_2S

Application instruction: Job preparation	
Tools, equipment and auxiliaries	Temperature gauge, DFT/WFT gauge Primer application equipment/agitator, Tape application equipment, Coating “hot box”
Additional coating materials	Subsequent Polyken coating systems, 933-25, 931
High humidity	Polyken® 939 can be applied in a humid atmosphere. The substrate should be free from condensing water which can be reached by keeping the temperature at least 5°F (3°C) above dew point.
Work area and substrate	The substrate surface should be dry, clean and protected against negative weather influences.
Product conditions	The Polyken® 939 shall be stored and/or transported in a dry, ventilated location. Storage temperature shall be a minimum of 60°F (16°C) and a maximum of 120°F (49°C).The minimum primer and roll body temperature for application will be 60°F (16°C).

Application instruction: Surface preparation	
General	The area to be coated has to be clean, dry, 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.
Preventing condensation of water	Prior to and during the application, the temperature of the substrate(s) must be at least 5°F (3°C) above the dew point.
Substrate temperature	Temperature of the substrate should preferably be between 68°F and 104°F (20°C / 40°C). Preheating may be required.

Application instruction: Brief version	
Step 1	Clean substrate to SSA-ST2, SSPC-SP3 (power wire brush) or SSA-SA 2, SSPC-SP6 (commercial blast). Surface (anchor) profile depth shall be no less than 1.0 mils (25 micron) and no greater than 3 mils (76 micron).
Step 2	Uniform primer application achieving 2 to 3 mil WFT. Primer should be “dry to touch” before application of inner layer.
Step 3	Normally, if the raised girth weld is over 3/32” (.24mm) in height, the weld shall be coated with the Polyken® #933-25 seam tape or #931 or #939 solid mastic filler. A filler strip, 6 inches (15.2 cm) wide shall be centred, smoothed, and coat the entire surface of the raised girth weld.
Step 4	Apply the subsequent Polyken® coating system over the 939 layer in order to finalize the system.

*** For further detailed information, please view the corresponding Application Guideline ***

Handling and commissioning	
Exposure to loads	Objects coated with Polyken® 939 should not be exposed to loads e.g. from supports- or lifting equipment.
Backfill	Backfill is possible immediately after completion of the coating application and after the 939 has been coated with an additional coating system. Consult application guidelines for specific instructions. Backfill should be clean and not contain any foreign items that can cause damage to the coating system.

Information	
Documentation	Extensive information is available on our web-site. Application instructions and other documentation can be obtained by contacting our offices, from our local distributor or by sending an email to **info@sealforlife.com**
Certified staff	Application of the described coating system shall be carried out by certified personnel.

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