

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

Max. operating temperature	85°C (185°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
939-125 Tape	3.2 mm (0.13")	50.8 mm (2.00")	6.1 m (20.00 ft)
939-500 Rope	11.2 mm (0.44")	11.2 mm (0.44")	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)
939-1250 Rope	26.3 mm (1.03")	31.8 mm (1.25")	4.4 m (14.50 ft)
939-2000 Rope	40.6 mm (1.60")	46.7 mm (1.84")	2.3 m (7.50 ft)

	Rolls/Case	Cases/Pallet	Rolls/Pallet
939-125 Tape	12	54	648
939-500 Rope	8	24	192
939-750 Rope	8	40	320
939-1000 Rope	6	40	240
939-1250 Rope	4	45	180
939-2000 Rope	4	40	160

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

Product properties of Polyken[®] 939

Property	Method	Typical values	
		939	Units
Elongation	ASTM D1000	> 600	%
Solids content		100	%
Penetration	ASTM D 217	85 – 105	DMM
Hardness		(300 g moving load)	
Low temperature flexibility		No cracking when bent around a 1" mandrel at -23°C (-9.4 °F)	
Chemical resistance		No visible deterioration after 30 days immersion in the following solutions:	
		- 5% Caustic Potash	
		- 5% HCL	
		- 5% H2SO4	
		- Saturated HS	

Equation for Pipe Coating Requirements

Squares of coating required** $\frac{(\text{width of coating in inches}) \times (\text{area of pipe in square feet})^*}{(\text{width of coating in inches} - \text{overlap in inches}) \times 100}$

* Area of pipe in ft² = (diameter in inches / 12) x 3.1416 x length in feet
 ** One Square = one hundred square feet = 9.29 square meters

Square meters of coating required $\frac{(\text{width of coating in mm}) \times (\text{area of pipe in square meter})^*}{(\text{width of coating in mm} - \text{overlap in mm}) \times 100}$

* Area of pipe in m² = (diameter in mm / 1000) x 3.1416 x length in meter

Squares per roll** $\frac{(\text{width of roll in inches}) \times (\text{length of roll in feet})}{(12) \times (100)}$

Square meters Per roll $\frac{(\text{width of roll in mm}) \times (\text{length of roll in m})}{(304.8) \times (30.48)}$

Rolls Required $\frac{(\text{squares of coating required})}{(\text{squares per roll})}$

Rolls Required $\frac{(\text{square meters of coating required})}{(\text{square meters per roll})}$

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 website. 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 should be carried out by certified personnel.



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