Polyken® Tape Technology SEALFORLIFE

PRODUCT DATA SHEET

POLYKEN® 930

Product Information

Product description: The Polyken® 930 is a cold applied tape coating system designed for the corrosion protection of field joints, fittings and specialty piping. The products can be used for both buried and above ground applications, and the product is suitable to resist UV irradiation. The unique adhesive retains conformability over a wide temperature range, yet exhibits an elevated level of shear resistance, which is a key in-ground performance characteristic. Coupled with a very malleable polyethylene backing, this versatile tape system can be applied by hand or with a wrapping machine.

Features:

- Heavy duty adhesive.
- Conformable to irregular shapes.
- No release liner.
- Worldwide reference lists.
- Complies with AWWA standard C-209, EN12068, DIN30672.
- Compatible with generic plant coatings systems.

Benefits:

- Ensures a strong bond & impervious seal.
- Offers a solution for nearly every application.
- Makes installation fast and easy.
- Established in-ground history.
- Reliable, high performance corrosion protection.
- Versatile.

Product selection guide

Max.operating temperature	85°C (185°F)
Recommended primer	1027 or 1033A
Additional mechanical layer	955 or 954
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)
Performance	AWWA C209 EN 12068 class B30 DIN 30672 class B30

Product construction

	930-35	930-50
Backing	6.5 mils (0.165 mm)	10 mils (0.254 mm)
Adhesive	28.5 mils (0.724 mm)	40 mils (1.016 mm)
Backing color	Black, White*	Black*

** Other colors are available on request.*

Product properties of Polyken® 930

		Typical values		
Property	Method	930-35	930-50	Units
Tensile strength	ASTM D 1000	15 2.6	25 4.4	pli N/mm
Elongation	ASTM D1000	340	300	%
Peel adhesion to primed steel	ASTM D1000	15.6 2.7	18.7 3.3	pli N/mm
Cathodic disbondment	ASTM G 8	0.25 6.4	0.27 6.9	in radius mm
Water vapor transmission	ASTM E 96B	0.07	0.07	perm
Water vapor transmission rate	ASTM F 1249 (100°F, 100% RH)	0.04 0.6	0.04 0.6	g/100in^2/ 24hr g/m^2/24 hr
Volume resistivity	ASTM D257	2.5x10^{16}	2.5x10^{16}	Ω cm
Dielectric breakdown	ASTM D 1000	650 25.6	650 25.6	V/mil kV/mm
Dielectric strength	ASTM D 149	21	28	kV
Insulation resistivity	ASTM E 257	1.4x10^7	2.0x10^7	MΩ
Impact resistance	EN 12068*	> 8		J
Indentation resistance	EN 12068 *	Class B30		

* For 930-35 tape installed with 66% overlap.

Equation for Pipe Coating Requirements

Squares of coating required**

$$\frac{\text{(width of coating in inches) x (area of pipe in square feet)*}}{\text{(width of coating in inches – overlap in inches) x 100}}$$

* 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

$$\frac{\text{(width of coating in mm) x (area of pipe in square meter)*}}{\text{(width of coating in mm – overlap in mm)}}$$

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

Squares per roll**

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

Square meters Per roll

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

Rolls Required

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

Rolls Required

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

Ordering information

Polyken® 930 Tape Coatings are available in roll form.
Example **930-35 BLK 2X50 ft 4.1cm**

930	Product type	*Standard Ordering options*
35	Total tape thickness in mils	35 mils (0.89 mm) 50 mils (1.27 mm)
BLK	Tape backing color	Black (BLK), White (WHI),Yellow (YEL), Purple (PUR)
2	Tape width in inches	1" (25 mm), 2" (50 mm), 4" (101 mm), 6" (152 mm)
50	Tape roll length in feet	50 ft (15 m)
4.1	Tape inner core diameter	4.1 cm (1.6"), 7.6 cm (3.0")

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

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	933-25 weld seam coating, 931 or 939 filler material, and 905, 954, or 955 mechanical protection layers
High humidity	Polyken® 930 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® 930 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	If required, apply weld seam coating or filler material
Step 4	Spirally or circumferentially apply the 930 with a 1% to 2% neckdown. A minimum of two layers of the 930 shall be applied.
Step 5	If a single 930 layer is required, then a mechanical protection outerwrap layer (905, 954, 955) shall be applied over the single layer of 930.
Step 6	Perform holiday detection per NACE SP0274

Handling and commissioning	
Exposure to loads	Objects coated with Polyken® 930 should not be exposed to loads e.g. from supports- or lifting equipment.
Backfill	Backfill is possible immediately after completion of the coating application. 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 should be carried out by certified personnel.

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

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