

POLYKEN® 1600

Product Information

Product description: The Polyken 1600-HT system is designed for the corrosion protection of new and existing pipelines with a maximum operating temperature of 250°F (121°C). The products can be used for both buried and above ground applications, and the product is suitable to resist UV irradiation. The coating layer consists of a cross-linked polyethylene backing and a cross-linked elastomeric adhesive capable of maintaining long-term protection at elevated temperature. The 1600 HT has a release liner to enable proper unwinding of the roll. Polyken 1600-HT system can also be used as an additional mechanical and UV protection overcoat on PP/PU/Epoxy coated pipelines.

Features:

- Proven cross-linked backing formulation for long term temperature resistance and flexibility up to 250°F (121°C)
- Shear Resistance at elevated temperatures
- High operating temperature rating
- Plant or in-field application
- User-friendly application to new or operating pipelines
- Manufactured at ISO certified facility

Product selection guide

Max. operating temperature	121°C (250°F)
Recommended primer	1619, 3019, 1033A
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

	1600-25-HT	1600-30-HT
Backing	10 mils (0.25 mm)	10 mils (0.25 mm)
Adhesive	15 mils (0.38 mm)	20 mils (0.51 mm)
Backing color	Black	Black

Product properties

Property	Test Method	Typical values 1600-25	Units
Tensile strength	ASTM D1000	40 70	Lbs/in N/cm
Elongation	ASTM D1000	500	%
50 mil system properties			
Peel adhesion to primed steel	ASTM D1000	24 42	Lbs/in N/cm
Peel adhesion to backing	ASTM D1000	10.4 18.2	Lbs/in N/cm
Shear Adhesion	ISO 21809-3, @ 120°C	0.04	N/mm ²
Cathodic disbondment	ASTM G8	0.4 10	in radius mm radius
Water vapor transmission rate	ASTM E398 (100°F, 100%RH)	0.01 0.1	g/100in ² /24 hr g/m ² /24hr
Volume resistivity	ASTM D257	10 ¹⁵	Ω.cm
Dielectric strength	ASTM D149	40	kV
Impact resistance	ASTM G-14	27 3.1	in-lb J
Penetration resistance	ASTM G-17 @ 23°C @ 120°C	40 53	% %
UV resistance	EN12068, annex F	Pass	
Temperature Range	Normal in-ground service	-30 to 250 +34 to 121	°F °C

Note: The typical values in this data sheet are based on lab prepared samples.

Values shown are not to be interpreted as product specifications.

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

* 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 $\frac{(\text{width of roll in inches})}{(12)} \times (\text{length of roll in feet}) \times 0.0929$

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® 1600-25-HT Tape Coatings are available in roll form.

Example **1600-25-HT BLK 2X50**

	Product type	Standard Ordering options
25	Total tape thickness in mils	25 mils (0.63 mm), 30 mils (0.76 mm)
BLK	Tape backing color	Black (BLK)
2	Tape width in inches	2" (50.8mm), 4" (101mm), 6" (152 mm), 18" (457 mm)
50	Tape roll length in feet	50 ft (15.24 m), 100 ft (30.5 m)*, 400 ft (121.9 m) for 18" wide roll only (MOQ 60 rolls)

* Min order quantities apply.

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	939-HT weld seam coating,
High humidity	Polyken® 1600 HT 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® 1600 HT 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

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

Step 4	Spirally apply the inner layer (anti corrosion) with a 1% to 2% neckdown. A minimum of two layers of the 1600 shall be applied in two separate 1" overlap wraps or a single layer at 50% overlap may be used.
Step 7	Perform holiday detection per NACE SP0274

Handling and commissioning	
Exposure to loads	Objects coated with Polyken® 1600 HT 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.



Seal For Life Industries - Stopaq B.V.
Stadskanaal, the Netherlands
Tel: +31 599 696 170

Seal For Life Industries BV
Westerlo, Belgium
Tel: +32 14 722 500

Seal For Life Industries US LLC
San Diego, USA
Tel: +1 858 633 9785

Seal For Life Industries Mexico
S de R.L. de C.V.
Tijuana, Mexico
US Tel: +1 858 633 9785
MX Tel: +52 664 647 4300

Seal For Life India Private Ltd.
Baroda, India
Tel: +91 2667 264 721

Further information is available on our website www.sealforlife.com, or by sending an inquiry to info@sealforlife.com

DISCLAIMER: Seal For Life Industries warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the technical data sheet when used in compliance with Seal For Life Industries' written instructions. Because many installation factors are beyond the control of Seal For Life Industries, the user shall determine the suitability of the products for the intended uses and assume all risks and liabilities in connection herewith. Seal For Life's liability is stated in its General Terms and Conditions of Sale. Seal For Life Industries makes no other warranty either express or implied. All information contained in this document is to be used as a guide and is subject to change without notice. This technical data sheet supersedes all previous data sheets on this product.