

# Polyken # 1600-HT

High Temperature Coating System



## Market

Oil, Gas or Water pipelines  
Pipeline Rehabilitation

## Applications

Girthwelds for Water, Oil or Gas pipelines

## Temperature Range

up to 250°F (121°C)

## System 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.

## Product Advantages

- **Proven cross-linked backing formulation for long term temperature resistance and flexibility up to 248°F (120°C)**  
Long-lasting performance.
- **User-friendly application to new or operating pipelines**  
Save time and Money.
- **Manufactured at ISO certified Facility**  
Reliability and Safety.

- **Shear Resistance at elevated temperature**  
Provides high functional performance and safety.
- **High operating temperature rating**  
Top performance in demanding conditions.
- **Plant or in-field application**  
Flexible and conformable backing for easy plant or field application.

## System Components

- **Primer layer #1619**  
Percent solids: 20  
Wt/ga: 7.4 lbs  
Flash point: 45°F (7°C)
- **#1619**  
Thickness: 25 and 30 mils (0.635 and 0.762 mm)  
Tensile strength: 40 lbs/in (7N/10mm)  
Elongation: 500%

## Product Construction

	1600-25HT	1600-30HT
• <b>Backing</b>	10 mils (0.25 mm)	10 mils (0.25 mm)
• <b>Backing Color</b>	Black or grey	Black or grey
• <b>Adhesive</b>	15 mils (0.38 mm)	20 mils (0.50 mm)

## Product Properties - 50 mil System

	Test Method	Typical Value	
		English	Metric
Peel Adhesion to pipe	ASTM D1000 @ 23°C	24 lbs/in.	42 N/ 10 mm
Peel Adhesion to backing	ASTM D1000 @ 23°C	10.4 lbs/in.	18.2 N/ 10 mm
Shear Adhesion to Pipe	Modified Aleyeskey method 85°C 121°C	0.0014 in/hr.	1 x 10 <sup>-8</sup> m/sec
		0.0002 in/hr.	1.3 x 10 <sup>-9</sup> m/sec
Cathodic Disbondment	ASTM G8	0.4 in. radius	10 mm radius
Water Vapor Transmission Rate	ASTM E398 (100°F, 100% RH)	<0.01g/100 in. <sup>2</sup> /24hr	<0.1g/m <sup>2</sup> / 24hr
Impact Resistance	ASTM G14	27 in. lb	3.1 Joules
Penetration resistance	ASTM G17 21°C 121°C	40%	40%
		53%	53%
Volume resistivity	ASTM D257	10 <sup>15</sup> ohm•cm	10 <sup>15</sup> ohm•cm
Dielectrical strength	ASTM D149	40 kV	40 kV
Temperature range	Normal in-ground service	-30° to 250°F*	+34° to 121°C

\* contact a Berry Plastics representative for specific project recommendations

## Ordering Information

Polyken 1600-25HT and -30HT are available in roll form.

1600-25 HT BLK 2 X 100FT (4.1)

Core diameter	3.0" not indicated in the description (4.1 cm) only on request
Tape roll length	50 FT (on 2", 4", 6" wide), 100 FT (on 4", 6" wide), 200 FT (on 6" wide) and 400 FT (on 18" wide)
Tape width	2, 4, 6, 18"
Tape backing color	Black
Total tape thickness	1600-25HT (25 mils/0.635mm) & 1600-30HT (30 mils/0.762mm)

For other ordering options please contact your Berry Plastics representative.

## Equation for Pipe Coating Requirements

$$\frac{(\text{Width of Coating in inches}) \times (\text{Area of pipe in square feet})^*}{(\text{Width of Coating in inches} - \text{Overlap in inches}) \times 100} = \text{Squares}^{**} \text{ of Coating Required}$$

\* Area of pipe in square feet = (Diameter in inches) / 12 x 3.1416 x (Length in ft)

\*\* One Square = One hundred square feet = 9.29 square meters

$$\frac{(\text{Width of Coating in mm}) \times (\text{Area of pipe in square meter})^*}{(\text{Width of Coating in mm} - \text{Overlap in mm})} = \text{Square meters of Coating Required}$$

(Width of Coating in mm - Overlap in mm)

\*Area of pipe in square meter = (Diameter in mm) /1000 x 3.1416 x (Length in meter)



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