

**POLYKEN<sup>®</sup> YGIII**

**Product Information**

**Product description:** The Polyken<sup>®</sup> YGIII System is a multilayer coating system used primarily for the protection of steel and ductile iron water pipelines. Polyken<sup>®</sup> 1019 Polyken<sup>®</sup> low VOC 1033A or Zero VOC Polyken<sup>®</sup> 1039 liquid adhesives provide a uniformly smooth contact surface to promote high adhesion of the coating system to the pipe. Liquid Adhesives are formulated with corrosion inhibitors and adhesion promoters. The unique formulation flows and fills surface profiles and irregularities. The Anti-Corrosion layer Polyken<sup>®</sup> 989 is engineered to assure a high bond to the primed surface with excellent conformability characteristics. The Middle and Outer mechanical protection layers Polyken<sup>®</sup> 955 series achieve a complete bond to the 989 inner layer, providing maximum handling and in-service protection for the coating system. The adhesives in these and all Polyken<sup>®</sup> tape systems contain proven anti-microbial additives.

**Features:**

- Worldwide reference lists.
- Impermeable to oxygen and moisture.
- Resistant to soil stress.
- Zero VOC coating system available.
- Uniform coating thickness.
- Low cathodic protection-current requirements.
- Exceeds AWWA standards.
- Compatible with large pipe diameters.
- Mechanical outer layer with UV protection.

**Benefits:**

- Proven long-term performance.
- Low cathodic protection costs. Saving cost over the life of the pipeline.
- Superior in-ground performance.
- Environmentally friendly.
- Easy to apply.
- Saving cost over the life of the pipeline.
- Reliable, high performance corrosion protection.
- Minimizes inventory, thus saving money.

**Product selection guide**

<b>Max. operating temperature</b>	85°C (185°F)
<b>Recommended primer</b>	1019, 1033A or 1039
<b>Recommended pipe preparation</b>	SSPC-SP6/NACE3 or SA 2 ½
<b>Performance</b>	AWWA C-214

**Product construction**

	Inner Layer 989-20	Middle Layer 955-30	Outer Layer 955-30 WHI
<b>Backing</b>	9 mils (0.229 mm)	25 mils (0.635 mm)	25 mils (0.635 mm)
<b>Adhesive</b>	11 mils (0.279 mm)	5 mils (0.127 mm)	5 mils (0.127 mm)
<b>Backing color</b>	Black	Gray	White

**Ordering information**

Polyken<sup>®</sup> 989, 955 Tape Coatings are available in roll form.

Example **989-20 BLK 12X1000**

989	Product type	Standard Ordering options
20	Total tape thickness in mils	20 mils (0.51 mm)
BLK	Tape backing color	Black (BLK)
12	Tape width in inches	4" (101mm), 6" (152 mm), 9" (228 mm), 12" (305 mm), 18" (457 mm)
1000	Tape roll length in feet	800 ft (244 m), 1000 ft (305 m)
	<b>955-30 GRA 12X1000</b>	
955	Product type	Standard Ordering options
30	Total tape thickness in mils	30 mils (0.762 mm)
GRA	Tape backing color	Gray (GRA)
12	Tape width in inches	4" (101 mm), 6" (152 mm), 9" (228 mm), 12" (305 mm), 18" (457 mm)
1000	Tape roll length in feet	800 ft (244 m), 1000 ft (305 m)
	<b>955-30 WHI JB 12X1000</b>	
955	Product type	Standard Ordering options
30	Total tape thickness in mils	30 mils (0.762 mm)
WHI	Tape backing color	White (WHI)
12	Tape width in inches	4" (101 mm), 6" (152 mm), 9" (228 mm), 12" (305 mm), 18" (457 mm)
1000	Tape roll length in feet	800 ft (244 m), 1000 ft (305 m)

**Product properties of Polyken<sup>®</sup> YGIII**

Property	Method	Typical values		Units
		989-20	955-30 & 955-30 WHI	
<b>Tensile strength</b>	ASTM D1000	30 5.3	50-65 8.8-11.4	pli N/mm
<b>Elongation</b>	ASTM D1000	300	300-400	%
<b>System properties 80 mils system</b>				
<b>Peel adhesion to primed steel</b>	ASTM D1000	18.7 3.3		pli N/mm
<b>Cathodic disbondment</b>	ASTM G8	0.25 6.4		in radius mm radius
<b>Water vapor transmission</b>	ASTM E96B	0.07		perm
<b>Water vapor transmission rate</b>	ASTM F1249 (100°F, 100%RH)	0.03 0.5		g/100in <sup>2</sup> /24 hr g/m <sup>2</sup> /24hr
<b>Volume resistivity</b>	ASTM E257	10 <sup>15</sup>		Ω.cm
<b>Dielectric breakdown</b>	ASTM D1000	650 25.6		V/mil kV/mm
<b>Dielectric strength</b>	ASTM D149	20-23		kV
<b>Impact resistance</b>	ASTM G-14	90 10		in-lb J
<b>Penetration resistance</b>	ASTM G-17	11-15		%

**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 ft<sup>2</sup> = (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 m<sup>2</sup> = (diameter in mm / 1000) x 3.1416 x length in meter

**Information**

<b>Documentation</b>	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 <a href="mailto:info@sealforlife.com">info@sealforlife.com</a>
<b>Certified staff</b>	Application of the described coating system should be carried out by certified personnel.



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