



## POLYKEN® # 942 & 955 EN 3-Ply Coating System for New Pipelines and Existing Pipeline Rehabilitation

### System Description

The Polyken 942/955 EN System is a multilayer coating system designed for the corrosion protection of pipelines operating in highly corrosive environments and exposed to high mechanical stresses that may be present particularly on large diameter pipes. The system consists of **#1027** liquid adhesive, **#942** three ply anti-corrosion inner layer and **#955-EN** mechanical outer layer and is fully certified to the DIN 30672 and EN12068 Class C50 standards. The three ply adhesive system produces a strong cohesive bond to the primed steel surface, at the spiral overlap and to the mechanical outer layer. The tough mechanical properties of the outer layer provide protection to the pipes during handling and installation.

### Product Features/Benefits

- Fully amalgamating overlapping areas  
**Forming a sleeve-type coating**
- Worldwide reference lists  
**Proven long-term in-ground performance**
- Impermeable to oxygen and moisture
- Resistant to soil stress  
**Superior in-ground performance**
- Uniform coating thickness  
**Plant coating quality with in-situ application**
- Low cathodic protection-current requirements  
**Saving cost over the life of the pipeline**
- Compatible with all pipe diameters and generic plant coating systems  
**Minimizes inventory, thus saving money**

### Product Selection Guide

Max operating temperature	65°C (150°F)
Recommended primer	1027
Recommended pipe preparation	ST2 1/2 - ST3 or SA 2 1/2
Compatible line coatings	PE, FBE, CTE, Tape and Coal Tar
Performance	DIN 30672 class C50, EN12068 class C50
Total installed tape system thickness	min 2.5 mm (100 mils)

Product Properties	Test method	Typical Value	
		942	955EN
Tensile Strength	EN12068	35lbs/in (61N/cm)	> 45pli (7.9 N/mm)
Elongation	EN12068	> 300%	> 300%
Saponification value	DIN30672	< 3	< 1

### System Properties Two layers 942 and two layers 955-EN

	Test method	Requirement	Typical Value
Shear Resistance to Primed Steel	EN12068	> 0.05 N/mm <sup>2</sup>	0.07 N/mm <sup>2</sup>
Peel Adhesion to Primed Steel	EN12068	> 1.0 N/mm (5.7 pli)	1.2 N/mm (6.9 pli)
Peel Adhesion Inner to Inner	EN12068	> 1.5 N/mm (8.5 pli)	2.2 N/mm (12.6 pli)
Peel Adhesion Outer to Inner	EN12068	> 1.5 N/mm (8.5 pli)	2.4 N/mm (13.7 pli)
Peel Adhesion Outer to Outer	EN12068	> 0.2 N/mm (1.1 pli)	1.3 N/mm (7.4 pli)
Cathodic Disbondment:	EN12068	< 20 mm radius	5 mm radius
Specific Electrical Resistance	EN12068	> 10 <sup>8</sup> ohm•m <sup>2</sup>	2 X 10 <sup>11</sup> ohm•m <sup>2</sup>
Dielectric Strength	ASTM D149		50 kV
Impact resistance	EN12068, class C50	> 15 J	>15 J
Penetration resistance	EN12068, class C50	> 0.6 mm remaining thickness	1mm remaining thickness

## Ordering Information

Polyken 942 and 955-EN Tape Coatings are available in roll form

Example : **942 4X50FT 4.1CM**

<b>942</b>	<b>Product type</b>	<b>Standard Ordering options</b>
4	Tape width in inches	2" (50.8 mm), 4" (101.6 mm), 6" (152.4 mm)
50	Tape roll length in feet	50 ft (15.2M), 100 ft (30.5 M), 200 ft (61 M)
4.1CM	Core inside diameter	1.6" (41mm), 3" (76mm)

Example : **955 EN BLK 4X50FT 4.1CM**

<b>955 EN</b>	<b>Product type</b>	<b>Standard Ordering options</b>
BLK	Tape backing color	Black (BLK)
4	Tape width in inches	2" (50.8 mm), 4" (101.6 mm), 6" (152.4 mm)
50	Tape roll length in feet	50 ft (15.2M), 100 ft (30.5 M), 200 ft (61 M)
4.1CM	Core inside diameter	1.6" (41mm), 3" (76mm)

Note : 942/955 EN tapes are installed with 1027 liquid adhesive, see latest datasheet for 1027, DS-1027

For other ordering options please contact your Berry Plastics representative.

## Equation for Pipe Coating Requirements

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

$$(\text{Width of Coating in inches} - \text{Overlap in inches}) \times 100$$

\* 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

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

$$(\text{Width of Coating in mm} - \text{Overlap in mm})$$

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

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