POLYKEN® 942CX & 955CX

3-Ply Co-extruded Coating System for New Pipelines and Existing Pipeline Rehabilitation

Polyken® Pipeline Coatings

System Description

The Polyken 942/955CX System is a co-extruded 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 and is fully certified to the DIN EN 12068 Standard (Class C50). The system consists of **#1027** liquid adhesive, **#942CX** three ply anti-corrosion inner layer and **#955CX** mechanical outer layer. 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. For the coating of joints with other mainline coatings the Polyken 942/955EN system is preferred due to its better conformability.

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
- Co-extruded Polyethylene and Butyl Rubber
  Superior cohesive strength

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
Total installed tape system thickness	min 2.5 mm (100 mils)
Performance	DIN EN 12068; Class C50

Product Properties	Test method	Typical Value 942-20CX	Typical Value 955-30CX
Tensile Strength	EN12068	>25 pli (4.4 N/mm)	> 45pli (7.9 N/mm)
Elongation	EN12068	> 300%	> 300%
Saponification value	DIN30672	< 1	< 1

System Properties Two layers 942-20CX and two layers 955-30CX

	Test method	Requirement	Typical Value
Shear Resistance to Primed Steel	EN12068	> 0.05 N/mm^2	0.08 N/mm^2
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)	2.8 N/mm (15.9 pli)
Peel Adhesion Outer to Inner	EN12068	> 1.5 N/mm (8.5 pli)	3.0 N/mm (17.0 pli)
Peel Adhesion Outer to Outer	EN12068	> 0.2 N/mm (1.1 pli)	0.7 N/mm (4.0 pli)
Cathodic Disbondment:	EN12068	< 20 mm radius	< 5 mm radius
Specific Electrical Resistance	EN12068	> 10^8 ohm•m^2	2 X 10^{11} ohm•m^2
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	1.6 mm remaining thickness

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Ordering Information

Polyken 942CX and 955CX Tape Coatings are available in roll form

Example : **942CX 4X50FT 4.1CM**

942CX	Product type	Standard Ordering options
4	Tape width in inches	2” (50 mm), 4” (101 mm), 6” (152 mm)
50	Tape roll length in feet	50 ft (15.2M), 100 ft (30.5 M), 200 ft (61 M), 400 ft (122 M)
4.1CM	Core inside diameter	3” or 76 mm, 1.6” or 41 mm

Example : **955CX 4X50FT 4.1CM**

955CX	Product type	Standard Ordering options
BLK	Tape backing color	White (WHT), Black (BLK)
4	Tape width in inches	2” (50 mm), 4” (101 mm), 6” (152 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	3” or 76 mm, 1.6” or 41 mm

Note : 942/955CX 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

$$\frac{\text{(Width of Coating in inches) x (Area of pipe in square feet)*}}{\text{(Width of Coating in inches – Overlap in inches) x100}} = \text{Squares** of Coating Required}$$

** 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

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

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

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BERRY PLASTICS CORPORATION AND SUBSIDIARIES

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