



## 600 SERIES COATING SYSTEMS

### COLD APPLIED PIPELINE COATING FOR HAND APPLICATION

#### DESCRIPTION:

**POLYGUARD 600 SERIES COATING SYSTEMS** are laminated protective coatings. The primary corrosion coating material is a rubberized bitumen coating, bonded to a white polyethylene film. For products that conform easily, Polyguard coatings have exceptional adhesion and mechanical strength. The coatings are supplied in rolls for easy application on all sizes of pipe.

**POLYGUARD 600 LIQUID ADHESIVE** is a fast drying, rubber based materials in a solvent solution. It is available in solvent systems that will conform to most local VOC requirements.

#### USES:

**POLYGUARD 600 SERIES COATING SYSTEMS** are for hand application for coating and wrapping of station piping, field joints, repairs on mill coated pipe, gas distribution, and for reconditioning of older lines.

#### ADVANTAGES:

- Excellent cathodic disbondment resistance.
- Uniform factory controlled thickness.
- Damaged coating areas can be repaired quickly and easily.
- Excellent resistance to water or vapor transmission.
- Resistant to deterioration from acids and alkalis encountered in normal soil.
- Excellent ability at the lap to resist infiltration of moisture.
- Elastomeric properties to accommodate normal expansion and contraction of the substrate.
- Easy to apply.
- Excellent peel adhesion.



600 Series Coating applied on a rehabilitation project.

| PROPERTY                               | TEST METHODS                                                                                                                                         | 600/634P COATINGS                                         | 610/CP50P COATINGS                                        |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|
| Nominal Coating Thickness              | ASTM D 1000                                                                                                                                          | 35 mils (.89 mm)                                          | 50 mils (1.27mm)                                          |
| Nominal Film Thickness                 | ASTM D 1000                                                                                                                                          | 10 mils (.25mm)                                           | 10 mils (.25mm)                                           |
| Tensile Strength                       | ASTM D 882-B                                                                                                                                         | 22.5 lb./in./width (4.0 kg./cm. width)                    | 22.5 lb./in./width (4.0 kg./cm. width)                    |
| Elongation at Break                    | ASTM D 882-B                                                                                                                                         | 400%                                                      | 400%                                                      |
| Dielectric Strength                    | ASTM D 149                                                                                                                                           | >12 KV                                                    | >12 KV                                                    |
| Low Temperature Flex at 0°F. (-17.8°C) | ASTM D 146                                                                                                                                           | No Cracking                                               | No Cracking                                               |
| Adhesion to Primed Steel               | ASTM D 1000                                                                                                                                          | 17.0 lb./in. width (3.0 kg./cm. width)                    | 17.0 lb./in. width (3.0 kg./cm. width)                    |
| Adhesion to Overlap                    | ASTM D 1000                                                                                                                                          | 14.0 lb./in. width (2.4 kg./cm. width)                    | 14.0 lb./in. width (2.4 kg./cm. width)                    |
| Cathodic Disbondment                   | ASTM G 8                                                                                                                                             | < 5.0 mm avg.                                             | < 5.0 mm avg.                                             |
| Water Vapor Transmission Rate          | ASTM E 96                                                                                                                                            | .032 grains/hr/ft <sup>2</sup> (.036 g/h-m <sup>2</sup> ) | .032 grains/hr/ft <sup>2</sup> (.036 g/h-m <sup>2</sup> ) |
| Water Absorption                       | ASTM D 570                                                                                                                                           | <.1%                                                      | <.1%                                                      |
| Temperature Ranges:                    | <ul style="list-style-type: none"> <li>● At Application 25°F. to 110°F (-4° to 43°C)</li> <li>● In Service -25°F. to 130°F (-32° to 54°C)</li> </ul> |                                                           |                                                           |

This information is based on our best knowledge, but POLYGUARD cannot guarantee the results to be obtained.



Polyguard is ISO 9001 certified since 1996.

## GUIDE SPECIFICATION:

**Handling Materials:** Polyguard coatings and liquid adhesives should be hauled and stored in such a manner as to prevent injury to the packages. All packages and rolls should be stored in a dry place, kept from contact with earth and protected from weather. It is recommended that the tape and liquid adhesive be transported in warmed vehicles and stored in heated buildings during cold weather. Although the coating can be utilized at lower temperatures, to maximize the quality application characteristics of the coating system, coating and liquid adhesives should be maintained at a temperature of 45°F (7°C) or higher at times of application.

**Surface Preparation:** The pipe shall be cleaned of all paint, oil and grease, mill scale, loose rust, welding residue, knurls, frost, dust, moisture, weeds, and other foreign matter. Where feasible and practical, the surface can be blast cleaned to a NACE No. 3 finish. Where mill coated pipe is involved, the liquid adhesive and coating should be applied to the girth weld, starting on top of the mill coating, at least 1" back from the edges of the mill coating.

**Liquid Adhesive Application:** Polyguard liquid adhesive should be applied at an average rate of 400 sq. ft. per gallon (10m<sup>2</sup>/liter). Stir liquid adhesive before using. Apply with brush or roller to clean and dry pipe surface. **DO NOT THIN POLYGUARD LIQUID ADHESIVE.** In cold weather, store inside prior to use.

**Wrapping:** Polyguard coating systems can be applied by spiral wrapping. The release sheet is to be removed immediately prior to the application. The bitumen surface of the coating shall be applied to the dry liquid adhesive. In spiral wrapping, a minimum of 1" (25.44 mm) lap shall be maintained. In areas designated by the owner as critical, overlap may be increased to 50%. Critical areas are determined by pipe diameter, weight of the pipe, type of backfill soil and the severity of soil stress conditions.

Where larger diameter pipe is involved or where soil stress conditions exist, it is advisable to over wrap the applied coating systems with Polyguard SP6 Outerwrap or other suitable outerwrap material.

Polyguard 600 Series Coatings should be applied with enough tension to eliminate any air pockets and also to conform to the weld bead area and beveled cut back. **DO NOT STRETCH EXCESSIVELY.**

**Coating Repairs:** The pipe and mill coating surface shall be clean and dry. Remove all loose or damaged coating around the holiday with a draw knife or other sharp hand tool. Feather edge the mill coating. Prime the pipe and adjacent coating area 2" wider than the repair coating. Either cigarette wrap or spiral wrap the repair coating to cover the entire holiday area, plus at least 2" of mill coating on either side of the damage area. Small pinholes may be patched by a single cigarette wrap over the coated pipe surface. The end laps should be at least 4". A postage stamp patch may be substituted for the complete cigarette wrap around the pipe when dry sandy or loam soil is used as backfill material. Patches are not recommended when backfill consists of large wet or dry dirt clods that could dislodge the patch from the pipe surface as the backfill settles.

**Lowering-in:** The pipe should be inspected immediately before lowering in. Polyguard 600 Series Coating Systems shall be holiday detected with an adjustable electronic detector at a maximum voltage in accord with the following formula:

$$V = \sqrt{T \times 1250}, \text{ where } V = \text{Voltage, and } T = \text{Coating thickness, in mils}$$

Excess voltage will break down the dielectric strength of the coating. Care should be taken to use the minimum voltage setting to locate defects in the coating system. Follow instructions of holiday equipment manufacturer.

**Backfilling:** Take care in backfilling to avoid sharp rocks or other material in backfill that would damage and penetrate the coating. In areas of rough backfill, suitable rock shielding shall be provided to protect the coating from backfill damage.

## PRECAUTIONS:

The liquid adhesive is an industrial coating and would be harmful or fatal if swallowed. It is marked as red label from the standpoint of flash point. Prohibit flames, sparks, welding and smoking during application. Solvents could be irritating to the eyes. In case of contact with eyes, flush with water and contact physician.

Avoid prolonged contact with skin and breathing of vapor or spray mist from liquid adhesive. In confined areas, use adequate forced ventilation, fresh air masks, explosion proof equipment, and clean clothing.

This material is sold by Polyguard Products, Inc. only for the purposes described in this literature. Any other use of the products is the responsibility of the purchaser and Polyguard Products does not warrant nor will be responsible for any misuse of these products. Polyguard Products will replace material not meeting our published specifications within one year from date of sale.

## MATERIAL SAFETY DATA:

All Polyguard Products Material Safety Data Sheets (MSDS) and precautionary labels should be read and understood by all user supervisory personnel and employees before using. Purchaser is responsible for complying with all applicable federal, state or local laws and regulations covering use, health, safety, and disposal of the product.

## MAINTENANCE:

None required.

## Protection Engineering

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