



RD-6[®] 170 COATING SYSTEM

For High Temperature Applications of Line Pipe and Girth Welds

U.S. PATENT NOS. 4,983,449 AND 5,120,381 AND FOREIGN PATENTS



DESCRIPTION:

POLYGUARD RD-6[®] 170 COATING SYSTEM consists of a geotextile backed protective pipeline coating applied over a companion liquid adhesive and a slip-plane outerwrap. Corrosion protection comes from a rubberized bitumen coating. Bonded to the outside surface of this coating is a strong, tightly woven, polypropylene geotextile, which provides non-shielding properties plus exceptional strength.

The coating is supplied in rolls for easy application by manual or power operated machines. Since **RD-6[®] 170** is supplied with a silicone coated separator sheet to keep the layers from sticking to each other, application machines have two spindles, one for coating unwind and one to take up the separator sheet as coating is applied.

RD-6[®] 170 can also be applied manually, without machine. However, it is important to recognize that much more tension can and should be used during its application than is normal for other types of products.

Use of **POLYGUARD SP-6[™] OUTERWRAP** is strongly recommended over the **RD-6[®] 170 COATING** for diameters > 4". This inexpensive layer will further reduce the possibility of soil stress.

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

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



Polyguard is ISO 9001 certified since 1996.

PROPERTY DATA RD-6[®] 170 COATING:

PROPERTY	ASTM METHOD	TYPICAL RESULTS (Metric)	TYPICAL RESULTS (English)
Total Thickness - Single layer of RD-6[®] 170 Coating	D 1000	1.27 mm	0.05 inches (50 mils)
Tensile Strength, Warp Direction	D 4632	34 kN/m	200 lbf/inch width
Tensile Strength, PSI	D 4632	24.1 MPa	3500 PSI
Elongation % at break (geotextile backing)	D 4632	< 20%	< 20%
Product Temperature Limit	Internal Polyguard	77° C	170° F
Water Vapor Transmission Rate	E 96 Procedure B	.006 g/h• m ²	.009 grains/h• ff
Puncture Resistance	E 154	1379 kPa	200 PSI
Burst Strength	D 751	2413 kPa	350 PSI
Cathodic Disbondment 77°F (25°C), 30 days, 1.5v	G 8	< 5 mm	< 5 mm (.197 in.)
170°F (77°C), 90 days, 1.5v	G 42	< 10 mm	< 10 mm (.4 in.)
Non-shielding properties (Does not shield cathodic protection currents)	Internal Polyguard	Pass (non-shielding)	Pass (non-shielding)
Dielectric Strength (breakdown voltage, KV)	D 149	> 12 KV	> 12 KV
Adhesion to primed surface	D 1000 Method A	2.1 kN/m	12 lbf/inch width
Adhesion to polyethylene	D 1000 Method A	2.1 kN/m	12 lbf/inch width
Impact Resistance	G 14	2.6 N/m	23.0 inch lb.

ADVANTAGES:

- **RD-6[®] 170** is a non-shielding coating. This means that if the coating disbonds, cathodic protection currents will not be shielded, and will be able to reach water underneath the coating.
- Has excellent resistance to cathodic disbondment, even if surface preparation is below standard, as often happens in field application.
- Geotextile backing properties of high strength, low “stretchability” (elongation), and high temperature resistance (100°F higher than polyethylene) all contribute to resistance of soil stress.
- Fast and easy to apply, and can be backfilled immediately after coating.
- Woven construction of geotextile backing permits bitumen to bitumen contact at the overlaps.
- Has excellent resistance to water or vapor transmission.
- Is not subject to deterioration due to exposure to below ground acids and alkalis that are encountered in normal soil.
- Provides uniform factory controlled thickness, compared to field applied liquid coatings.
- Elastomeric properties to accommodate normal expansion and contraction of the substrate.

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.

SAFETY:

All **Polyguard Products** Safety Data Sheets (SDS) 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.

TECHNICAL SERVICE:

Protection Engineering
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