

## RD-6® HIGH TEMPERATURE 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® HT COATING SYSTEM** is a non-shielding anti-corrosion system used on buried and submerged line pipe, rehabilitation, and new construction girth welds. RD-6 HT® can also be used above ground but the coating must be protected from harmful UV rays. When used above ground, Polyguard recommends using the RD-6 UVO for an extra layer of protection from the sun. The RD-6 Coating System consists of a liquid adhesive, a geotextile backed protective pipeline coating and SP-6™ outerwrap. Corrosion protection comes from the polymer modified coating layer. Bonded to the outside surface of this coating is a strong, tightly woven, polypropylene geotextile fabric, which provides non-shielding properties plus high breaking strength and low elongation. It is suitable for use with pipeline operating temperatures not exceeding 190°F (88°C). RD-6 has been in use since 1988 providing effective corrosion protection.

RD-6 HT coating is manufactured in rolls for ease of application using a Polyguard approved machine such as the Wrapster or power operated machine. RD-6 HT is produced with a silicone coated release liner to prevent the layers from adhering to one another and assist in the application process. The Polyguard Wrapster is designed with two spindles, one providing tension of the RD-6 HT coating being applied to the pipe and the other to spool the release liner during the application process.

RD-6 HT utilizes compression and tension during the application process made possible by the woven geotextile, polypropylene backing to ensure proper long-term performance. RD-6 HT may be applied manually without using the Wrapster, but it is important to recognize that adequate tension should be used consistently during its application.

**POLYGUARD SP-6™ OUTERWRAP** is strongly recommended to be applied over the **RD-6 HT COATING** for pipe diameters > 4". This inexpensive, non-shielding layer will further reduce damage that may be caused by soil stress.

**POLYGUARD 600 LIQUID ADHESIVE** is a fast-drying solution that consists of a polymer base in a solvent.

#### ADVANTAGES OF RD-6 HT:

- **RD-6<sup>®</sup> HT** is a non-shielding coating designed for high temperature service. In the case of a coating disbondment, the cathodic protection current will not be shielded and will be able to reach the substrate.
- **RD-6 HT** has excellent resistance to cathodic disbondment, even with below standard surface preparation.
- The geotextile backing used with **RD-6 HT** provides physical properties of high breaking strength, low elongation and high temperature resistance which all contribute to resistance of soil stress and continued corrosion protection.
- **RD-6 HT** is fast, easy-to-apply, and can be backfilled immediately after coating.
- **RD-6 HT** has visco-elastic properties to accommodate normal expansion and contraction of the substrate.
- The woven construction of the geotextile backing of **RD-6 HT** permits contact throughout the overlaps providing stronger adhesion in this critical area of the coating.
- **RD-6 HT** has excellent water vapor transmission resistance.
- **RD-6 HT** has a uniform factory-controlled thickness, typically not possible with field-applied liquid coatings.

#### PROPERTY DATA RD-6<sup>®</sup> HT COATING:

PROPERTY	ASTM METHOD	TYPICAL RESULTS (S.I.)	TYPICAL RESULTS (U.S. Customary)
Total Thickness - Single layer of <b>RD-6<sup>®</sup> HT</b> Coating	D 1000	1.27 mm	0.05 inches (50 mils)
Breaking Strength	ASTM D1000	177N/10mm width	101 lbs. f/inch width
Elongation % at Break	ASTM D1000	<30%	<30%
Product Temperature Limit	Internal <b>Polyguard</b>	88° C	190° F
Water Vapor Transmission Rate	E 96 Procedure B	<b>0.007</b> g/h•m <sup>2</sup>	<b>0.01</b> grains/h•ft <sup>2</sup>
Cathodic Disbondment	G 95	< 2.0 mm	0.08 in.
	G 95	< 2.0 mm	0.08 in.
Non-shielding properties (Does not shield cathodic protection currents)	Internal <b>Polyguard</b>	Pass (non-shielding)	Pass (non-shielding)
Dielectric Strength (breakdown voltage, KV)	D 149	>14kV (274V/mil)	>14kV (274V/mil)
Adhesion to primed surface	D 1000 Method A	47N/m	27 lbf/inch width
Adhesion to polyethylene	D 1000 Method A	30N/m	17 lbf/inch width
Impact Resistance	G 14	3.86 N/M	34.17 in./lbs.

#### 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.

#### HEALTH AND 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:

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