

PRITEC® Superior Pipeline Protection

PRITEC® pipe coating is a significant advancement in pipeline protection. An exclusive product of the worldwide Bredero Price Coating Companies, PRITEC® provides superior mechanical and corrosion protection. Its performance is proven by extensive testing, and in diverse service around the world.

PRITEC®...a Seamless Coating System Applied to Specified Thickness

Through its utilization of two time-tested and proven materials, polyethylene and butyl adhesive, PRITEC® protects pipe against corrosion with a firmly bonded, damage resistant coating.

The two materials are heated and applied through a dual, side-extrusion process. Although lightweight, the coating is tough enough to resist handling during storage, transportation, and construction. In addition, the material withstands the stresses of field bending, even at sub-zero temperatures.

The pipe surface must be cleaned to commercial blast standards. Full cleaning and removal of rust and mill scale is sufficient, because the thickness of the coating effectively covers slivers and pipe-surface irregularities.

PRITEC® application requires only minimal preheating of the pipe (typically to 75 to 110 degrees F.) This favorably affects application economy by reducing fuel usage.

Extrusion Application A special compound of butyl-rubber adhesive is introduced into the first of two extruders. Since the adhesive characteristics of the coating depend upon the bonding agent, the material is regularly tested to assure its conformity to specifications. A select grade of polyethylene is fed into the second extruder. Both materials are heated to a near molten state.

The rotating pipe is moved past the extrusion dies, with pipe travel and rotation speeds closely controlled to meet the thickness requirements of both materials and assure uniform application.

The butyl-rubber adhesive is first applied to specified thickness (8 to 20 mils, nominally.) The second extruder applies overlapping layers of polyethylene over the adhesive. Controlled extrusion methods provide application of polyethylene to specification. Increased thickness for mechanical protection is required and for use with large diameter pipe.

The coated pipe is water-cooled and the coating at the pipe ends is removed to the cutback specified for field welding. Finally, the pipe is electrically inspected for holidays. PRITEC® application system is simple, rapid and continuous, permitting maximum quality while attaining high daily output. The entire process is environmentally clean, producing no noxious fumes either during application or when the coated pipe is welded.

PRITEC® PIPE COATING APPLICATION SPECIFICATION

1.0 Scope

This specification covers the procedures for the application of PRITEC® for protection against external corrosion.

2.0 Surface Preparation

- 2.1** Pipe should be ordered bare, free of mill preservatives.
- 2.2** The exterior of the pipe shall be free of mill scale, rust, rust preventatives, or other foreign matter. Pipe shall be blast-cleaned with sand, grit, or shot to a NACE No. 3 Commercial finish.

3.0 Coating

The specified thickness of butyl-rubber adhesive shall be extruded spirally around the pipe. Immediately after the adhesive, overlapping layers of polyethylene shall be applied to produce a bonded, seamless coating to specified thickness.

4.0 Quality Control

- 4.1** Pipe coating shall be 100% inspected for holiday's immediately after application with a holiday detector adjusted to provide sufficient voltage to produce a spark through a pinhole in the coating.
- 4.2** Repairs to small holidays may be made by using an approved shrink-type polyolefin material. Repairs will be inspected with a holiday detector.
- 4.3** Defective coating shall be recoated to meet specification.

PRITEC® Exhibits the Qualities Demanded of a Superior Coating

Resists holidays

The unique application system and high quality materials unite to give PRITEC® maximum resistance to the development of holidays from the plant to the construction site. Durable, PRITEC® maintains its protective values during transportation and pipeline construction, even in subzero temperatures.

Resists cathodic disbonding

PRITEC®'s excellent adhesion to the pipe surface greatly minimizes cathodic disbonding, affords a substantially constant electrical resistivity, and provides a superior moisture barrier between the pipe and its environment, thus inhibiting corrosion and providing effective dielectric properties.

Self-healing property

PRITEC® exhibits a unique self-healing characteristic that provides an additional safeguard for maximum corrosion protection. The butyl-rubber adhesive combats minor mechanical damage by flowing into and sealing small cuts and gouges in the polyethylene surface.

Lasting stability

PRITEC® resists mechanical damage and withstands exposure to weather and ultraviolet radiation for prolonged periods without degradation. PRITEC® also demonstrates minimal cold flow. These qualities help assure the coating's integrity even when installation is preceded by long-term storage.

Tough, Ductile, and Durable... PRITEC® Resists Damage During Transport, Laying and Bending

All pipe coatings can be damaged during transportation, storage, and pipeline construction. Reasonable care must be exercised to obtain optimum results from impact strength, toughness, and ductility makes it an exceptionally durable pipe coating. These properties may minimize or eliminate the need for rock shield or select backfill in rocky terrain, an important factor in pipeline construction economics. Should the coating be damaged, PRITEC®'s compatibility with readily available repair materials makes field repairs quick and reliable.

Consider the TOTAL Economics in Selecting a Pipeline Coating!

Once the corrosion engineer is fully satisfied that a pipe coating will provide satisfactory protection against corrosion and related factors, overall economics are a major consideration for the final coating selection.

Because PRITEC® is plant applied, pipe is delivered to the right-of-way over 98% coated. Further, because of its physical characteristics, PRITEC® is less susceptible to damage during storage, transportation, and construction. Right-of-way repairs are minimal. More and more, engineers are specifying the use of select pad and backfill material to protect the coating during installation and line usage. Often, rock shield is used to prevent damage during backfilling operations. PRITEC®, because it is thick and often permits lower requirements in these areas, provides a significant reduction to installation costs.

PRITEC®, with its across-the-board integrity, and particularly high resistance to cathodic disbonding, assures minimum cathodic protection costs over the life of the line. Today's PRITEC® is highly competitive in price with other quality coatings. When all factors are considered, PRITEC® can contribute significantly to the cost effectiveness of your pipeline.

PRITEC® is Performance Proven Through Service Around the World

Since its introduction, PRITEC®'s performance has demonstrated the qualities demanded of a pipe coating and has gained wide acceptance. It has proven its effectiveness as an economical, reliable method of combating costly corrosion on pipelines throughout the world.

Applications of PRITEC® -coated pipe include crude oil, gas, products pipelines; high-voltage underground electrical systems; and ductile iron pipe. PRITEC® has also been concrete coated and can serve effectively in swamps, marshes, and offshore environments.

As pipelines are constructed in increasingly hostile environments, the specifications for coatings become more demanding. PRITEC® provides the proven mechanical and corrosion protection to meet these demands.

Checklist of PRITEC® Pipe Coating Advantages

- Available for all pipe diameters
- Applicable for carbon steel, stainless steel, aluminum pipe
- Increased thickness available to specifications for added mechanical protection
- Excellent bond of coating to pipe. Eliminates water migration between pipe and coating
- Broad operating temperature range: -40 to +180 degrees F
- High impact resistance to mechanical damage during transport, storage, bending and installation
- Resistance to soil stresses
- Black color assures prolonged protection against ultraviolet radiation
- Resistance to bacteriological and chemical damage
- High resistance to cathodic disbonding
- Ductility of coating permits normal field bending at -40 degrees F without damage to coating
- Elimination of noxious fumes during welding
- Self-healing characteristic
- Can be concrete coated by standard, high-production methods