



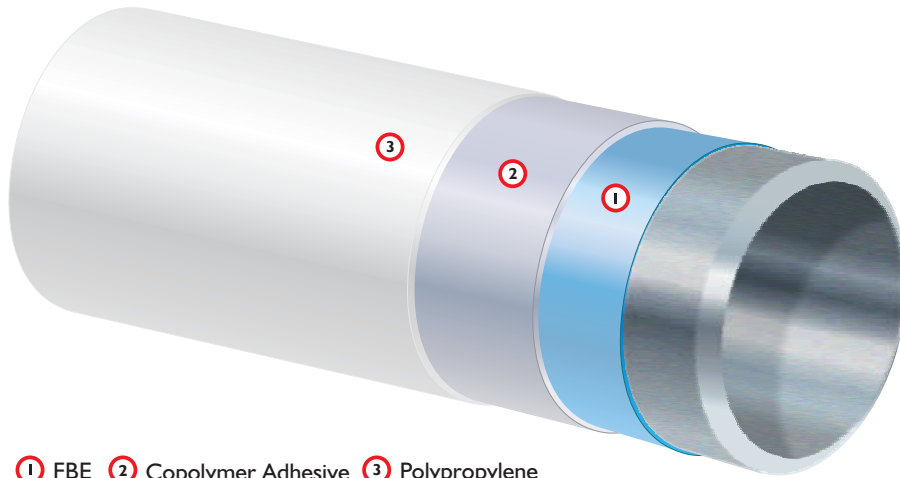
BREDERO SHAW

A SHAWCOR COMPANY

the
**GLOBAL
LEADER**
in pipe coating solutions.

3LPP

Three Layer Polypropylene Coating



① FBE ② Copolymer Adhesive ③ Polypropylene

PRODUCT DESCRIPTION

Bredero Shaw is the world's leading provider of Three Layer Polypropylene Systems (3LPP). Bredero Shaw's 3LPP System is a multilayer coating composed of three functional components. This anti-corrosion system consists of a high performance fusion bonded epoxy (FBE) followed by a copolymer adhesive and an outer layer of polypropylene which provides the toughest, most durable pipe coating solution available. 3LPP Systems provide excellent pipeline protection for small and large diameter pipelines with moderate operating temperatures.

FEATURES AND BENEFITS

High Temperature Corrosion Protection

The FBE component of the 3LPP System provides excellent adhesion to steel, thereby providing superior long term corrosion resistance and protection of pipelines operating at high temperatures. The superior adhesion properties of the FBE also results in excellent resistance to cathodic disbondment which reduces the total cost of cathodic protection during the operation of the pipeline.

Engineered Solutions

Advanced manufacturing techniques allow the 3LPP System to be customized to your specific project. The system can be applied to various pipe diameters from 90 mm (3.5") to over 1220 mm (48"). 3LPP System can also be applied in a wide range of thicknesses to cost effectively meet unique project specifications and performance requirements.

Excellent Mechanical Protection

The tough outer layer of polypropylene protects pipelines during transportation and installation thereby reducing costly repairs while also providing added in-ground protection against shear forces, chemicals and abrasive soil conditions. By increasing the thickness of the polypropylene outer layer, the 3LPP System can provide the highest level of mechanical protection across many diverse environments without requiring the use of costly select backfill.

Global Availability

Bredero Shaw has a network of 27 coating plants strategically located across 6 continents to minimize pipe transportation costs. The 3LPP System can be manufactured in a single plant or in multiple coating plants to improve project logistics. High capacity within the Bredero Shaw plant network allows the client to benefit from single source advantages, ultimately providing more cost effective management of pipe coating needs.

PRODUCT DATA SHEET



Oil & Gas pipelines



Large diameter pipelines



Small diameter pipelines



High operating temperatures



High abrasion environments

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TYPICAL PRODUCT PROPERTIES

PROPERTY	3LPP
Minimum Pipe Diameter	90 mm (3.5")
Maximum Pipe Diameter	1220 mm + (48"+)
Minimum Pipe Length	5.5 m (18')
Maximum Pipe Length	24.4 m (80')
Minimum Recommended Operating Temperature	-40°C (-40°F)
Maximum Recommended Operating Temperature	110°C (230°F)*

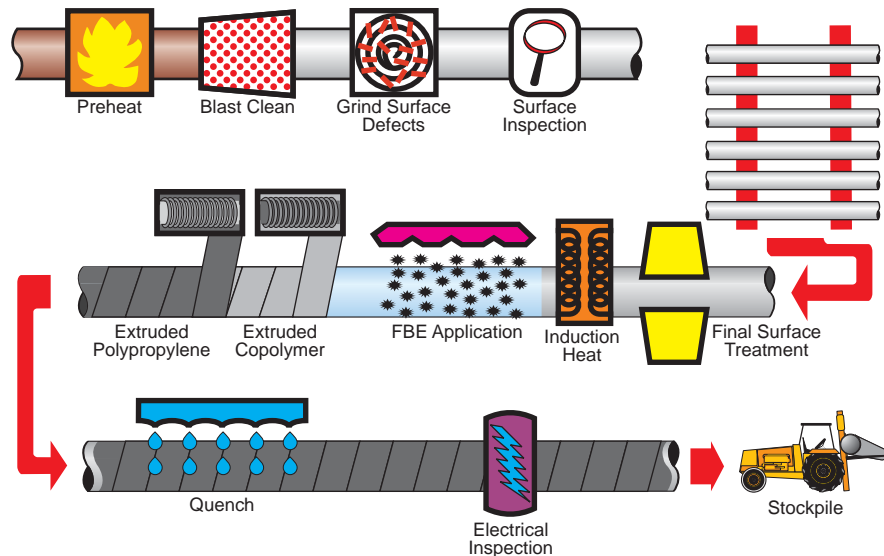
Values shown are typical and may vary from plant to plant. Consult Bredero Shaw for special requirements.

* The 3LPP product can be used at higher temperatures under certain conditions.

APPROVALS

- CSA Z245.21
- DIN 30678
- ISO 9001:2000
- DIN 30670
- NF A49-711

PRODUCT APPLICATION PROCESS



PLANTS

Fontana, California	Ellon, Scotland	Rayong, Thailand
Pearland, Texas	Leith, Scotland	Kuantan, Malaysia
Monterrey, Mexico	Orkanger, Norway	Kabil, Batam Island, Indonesia
Veracruz, Mexico	Jubail, Saudi Arabia	Kembla Grange, Australia
Belo Horizonte, Brazil	Ras Al Khaimah, UAE	

BREDERO SHAW: THE GLOBAL LEADER IN PIPE COATING SOLUTIONS

Bredero Shaw is the world leader in pipe coating solutions, with more than 75 years of experience, over 27 pipe coating facilities on 6 continents and the largest team of technical and service specialists in the business. Bredero Shaw offers technologically advanced solutions for anti-corrosion coatings, protective and weight coatings, thermal flow assurance coatings, internal coatings, custom coatings and field joints for both onshore and offshore applications. This broad range of products and services provides Bredero Shaw with the unique capability to service the full spectrum of pipeline protection and flow assurance requirements. Consult your Bredero Shaw representative for your unique project requirements.

The information contained herein is indicative of the types of coatings provided by Bredero Shaw, and is not intended to be a guarantee that a particular coating will be suitable for a given application. Since many unique environmental, operating, and design conditions must be considered, the user shall determine the suitability of the coating for the intended use and assume all the risks and liabilities in connection therewith. Bredero Shaw's liability is stated in our standard conditions of sale.

3LPP

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