



**Product Description**

Polyeuro® 5801-FR is a fast setting, rapid curing, 100% solids, flexible, aromatic, two component, spray polyurea that can be applied to suitably prepared concrete and metal surfaces. It may be applied in single or multiple applications without appreciable sagging and is relatively insensitive to moisture and temperature allowing application in most temperatures. Polyeuro® 5801-FR offers a tack free time of less than 10 minutes and exhibits 350% ± 50% elongation upon curing with 80 Shore A hardness.

**Features**

- Coats Carbon or Mild Steel Metals Without Primer
- Elastomeric
- Excellent Thermal Stability
- Good Chemical Resistance
- Installed With or Without Reinforcement in Transitional Areas
- Low-Temperature Flexibility
- Meets ASTM E84 Class 1 Fire Test Criteria\*
- Meets USDA Criteria
- Odorless
- Seamless
- Zero VOC (100% Solids)

**Typical Uses**

- Airports
- Cold Storage Facilities
- Fertilizer Plants
- Food Processing Plants
- Industrial and Manufacturing Facilities
- Landfill Containment
- Marine Environments
- Mining Operations
- Paper and Pulp Mills
- Parking Garage Decks
- Power Plants
- Refineries
- Secondary Containment
- Structural Steel
- Walkways and Balconies
- Warehouse Floors
- Water and Wastewater Treatment Plants

**Packaging**

- 10-gallon kit**      5 gallons (18.9 liters) Side-A and 5 gallons (18.9 liters) Side-B
- 100-gallon kit**    50 gallons (189 liters) Side-A and 50 gallons (189 liters) Side-B

**Technical Data (Based on Draw Down Film)**

<b>Mix Ratio by Volume</b>	1A : 1B
<b>Pot Life @ 75°F (24°C), 50% R.H.</b>	35 - 45 seconds
<b>Tack Free Time (thickness &amp; substrate temperature dependent)</b>	6 - 9 minutes
<b>Recoat Time</b>	0 - 6 hours
<b>Viscosity at 150-160°F (66.5-71°C)</b>	
<b>Side-A</b>	100 ± 20 cps
<b>Side-B</b>	50 ± 20 cps
<b>Density (Side A &amp; B Combined)</b>	8.81 lbs/gal
<b>Flash Point</b>	> 200°F (93.3°C)
<b>Hardness, ASTM D2240</b>	80 ± 5 Shore A
<b>Tensile Strength, ASTM D412*</b>	1500 ± 200 psi 10.34 ± 1.37 MPa
<b>Elongation, ASTM D412*</b>	350 ± 50%
<b>Tear Resistance, ASTM D412*</b>	250 ± 30 pli 43.8 ± 5.3 kNm
<b>Service Temperature - Dry</b>	-40°F to 250°F -40°C to 121°C
<b>Service Temperature - Wet</b>	40°F to 120°F 4.44°C to 48.89°C

**Burn Testing Class 1 ASTM E84 (@20 mil or less)**      Passed

(\*These physical properties from sample sprayed with Graco EXP2 @ 2000 psi minimum, with Fusion Gun AP4242 @ 150-160°F (65°C to 71°C) blistering. Color change, gloss reduction & chalking are noted. Different machine and parameter will change these properties. User should perform their own independent testing as properties are approximate).

**Colors**

Clear/Neutral. Custom colors are available upon request. Color Packs, when used, must be added to Side-B.

Due to its aromatic composition, Polyeuro® 5801-FR will tend to yellow or darken in color and will become flat after exposure to UV light. A topcoat can be applied to Polyeuro® 5801-FR within six hours of application with an aliphatic polyurethane/ polyurea coating for a colorfast finish.

**Coverage**

Polyeuro® 5801-FR may be applied at any rate to achieve desired thickness. Theoretical coverage for 1 mil (0.254 microns) thickness is one gallon per 1600 sqft (3.78 liters per 149 sqm).

Estimating Formula: (1600 sqft per gal /Dry Mil Thickness) x Solids Content = Application Rate per gallon.

**Surface Preparation**

In general, coating performance and adhesion are directly proportional to surface preparation. Most failures in the performance of surface coatings can be attributed to poor surface preparation. Polyurea coatings rely on the structural strength of the substrate to which they are applied. All surfaces must be free of dust, dirt, oil, grease, rust, corrosion and other contaminants. When coating previously used substrates, it is important to consider the possibility of substrate absorption, which may affect the adhesion of the coating system, regardless of the surface preparation. Polycoat recognizes



the potential for unique substrates from one project to another. The following information is for general reference. For project-specific questions, contact Polycoat.

#### **NEW AND OLD CONCRETE**

Refer to SSPC-SP13/NACE 6, or ICRI 03732: CSP 3-5. New concrete must be cured for 28 days prior to product application. Surface must be clean, dry, sound and offer sufficient profile for product adhesion. Remove all dust, dirt, oil, form release agents, curing compounds, salts, efflorescence, laitance and other foreign matter by shotblasting and/or suitable chemical means, in accordance with local chemical regulations. Rinse thoroughly to achieve a pH between 8.0 and 11.0. Allow to dry completely. If old concrete has a surface that has deteriorated to an unacceptably rough surface, Polycoat Products PC-260 or a mixture of Polyprime 21 and sand should be used as a repair agent for cracks, spalls, bug holes and voids. Upon full cure of the repair agent, prime the entire surface intended for coating.

#### **CONCRETE SURFACE PREPARATION REFERENCE**

ASTM D4258 - Standard practice for cleaning concrete.  
ASTM D4259 - Standard practice for abrading concrete.  
ASTM D4260 - Standard practice for etching concrete.  
ASTM F1869 - Standard test method for measuring moisture vapor emission rate of concrete.  
ICRI 03732 - Concrete surface preparation.

#### **WOOD**

All wood should be clean, dry and free of any knots, splinters, oil, grease or other contaminants. Splintered or rough areas should be sanded. Knots should be repaired using Polycoat Products PC-260 with sand. Upon full cure of the repair agent, prime the entire surface intended for coating.

#### **STEEL (ATMOSPHERIC AND IMMERSION EXPOSURE)**

Remove all oil, grease, weld spatters and round off any sharp edges from surface. Minimum surface preparation is Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Optimum surface profile is 2-3 mils. Prime and shoot Polyeuro® onto any bare metal the same day as it is cleaned to minimize any potential flash rusting.

#### **ALUMINUM**

Aluminum should be blasted with aluminum oxide or sand, and not with steel or metal grit. Excessive blasting may result in a warped or deformed surface. After blasting, wash aluminum with a commercially available aluminum cleaner. Allow to dry, then prime.

#### **BRASS AND COPPER**

Brass and copper should be blasted with sand, and not with steel or metal grit. Remove all dust and grease prior to applying primer.

#### **GALVANIZED SURFACES**

Clean and degrease any contaminated surfaces before priming. Do not blast galvanized surfaces with an abrasive grit. An adhesion test is recommended prior to starting the project.

#### **FIBERGLASS REINFORCED PLASTIC**

The gel coat should be lightly blasted or sanded with 80 grit sandpaper and cleaned.

#### **PLASTIC FOAMS**

Enhanced adhesion is obtained when the foam is mechanically abraded. When coating polystyrene, do not use a solvent-based primer.

#### **TEXTILES, CANVAS, FABRICS**

Adhesion to most fabrics, geothermal membranes and textiles does not require a primer.

#### **STAINLESS STEEL**

Stainless steel may be grit blasted and degreased before priming. Some stainless steel alloys are so inert that it is not possible to achieve a satisfactory bond. An adhesion test is recommended prior to starting the project.

#### **NEW AND OLD CAST IRON**

Blast with a steel grit and degrease before priming. Old cast iron is difficult to prepare for a satisfactory bond. It can absorb oil and water soluble contaminants that will keep returning to the surface after the coating system has been applied and affect the coating system adhesion. An adhesion test is recommended prior to starting the project.

#### **ALL OTHER SURFACES**

An adhesion test is recommended prior to starting the project.

#### **Mixing**

Polyeuro® 5801-FR may NOT be diluted under any circumstances. Thoroughly mix Polyeuro® 5801-FR Side-B with air driven power equipment until a homogeneous mixture and color is achieved.

#### **Application**

Both Side-A and Side-B materials should be preconditioned to 75-80°F (24-27°C) before application. Recommended surface temperature must be at least 5°F (3°C) above the dew point. Polyeuro® 5801-FR should be applied using a plural component, heated, high pressure 1:1 spray mixing equipment like Graco's Reactor, Glass Craft or other equivalent machine may be used. Both Side-A and Side-B materials should be sprayed at a minimum of 2000 psi and at temperatures above 150°F (66°C). Adequate pressure and temperature should be maintained at all times. Polyeuro® 5801-FR should be sprayed in smooth, multidirectional passes to improve uniform thickness and appearance. \*Polyeuro 5801-FR should be applied 20 mils on non combustible surface to pass as class 1 fire-rated system.

#### **Storage**

Polyeuro® 5801-FR has a shelf life of one (1) year from date of manufacture in original, factory-sealed containers when stored indoors at a temperature between 60-95°F (15-35°C).

Side-A and Side-B drums are recommended to be stored above 60°F (15°C). Avoid freezing temperatures.

Store drums on wooden pallets to avoid direct contact with the ground. If stored for a long period of time, rotate Side-A and Side-B drums regularly.

#### **Limitations**

Do not open until ready to use. Both Side-A and Side-B containers must be fitted with a desiccant device during use.

#### **Warning**

**This product contains Isocyanates and Curative Material.**



**Limited Warranty:** Please read all information in the General Guidelines, Technical Data Sheets, Guide Specifications and Safety Data Sheets (SDS) before applying material. These products are for professional use only and preferably applied by professionals who have prior experience with the Polycoat Products materials or have undergone training in application of Polycoat Products materials. Published technical data and instructions are subject to change without notice. Contact your local Polycoat Products representative or visit our website for current technical data, instructions, and project specific recommendations.

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