



Product Description

Polyeuro® 5502 FG (Food Grade) 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. Polyeuro 5502 FG has an extremely fast gel time which makes it suitable for most polyurea installations. With a dry film service temperature from -40F to 250F, its very durable and has excellent field performance. 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® 5502 FG offers a tack free time of less than sixty seconds and exhibits 450% elongation upon curing with 50 Shore D hardness. Polyeuro® 5502 FG is NSF 51 approved for dry solid food contact up to 104°F.

Features

- Zero VOC (100% Solids)
- Excellent Thermal Stability
- Low Temperature Flexibility
- Good Chemical Resistance
- Installed With or Without Reinforcement in Transitional Areas
- Coats Carbon or Mild Steel Metals without Primer
- Installed With or Without Reinforcement in Transitional Areas
- Odorless
- Seamless
- Meets USDA Criteria

Typical Uses

- Silos
- Dry Food Dispensers
- Cold Storage Facilities
- Food Processing Plants
- Secondary Containment
- Dry Food Containers
- Industrial and Manufacturing Facilities
- Dry Food Storage
- Warehouse Floors
- Paper and Pulp Mills
- Marine Environments

Packaging

- 10-gallon kit** 10 gallon kit: 5 gallons Side-A (Isocyanate side) and 5 gallons Part-B (Resin side).
- 100-gallon kit** 100 gallon kit: 50 gallons Side-A (Isocyanate side) and 50 gallons Part-B (Resin side).

Technical Data

Mix Ratio by Volume	1A : 1B
Pot Life @ 150-160°F (65.5-71°C), 50% R.H.	4-8 seconds
Tack Free Time (thickness & substrate temperature dependent)	45-60 seconds
Recoat Time	0-6 hours
Viscosity at 150-160°F (67-71°C)	
Side-A	50 ± 20 cps
Side-B	50 ± 20 cps
Density (Side A & B Combined)	8.81 lbs/gal
Flash Point	> 200°F (93.3°C)
Hardness, ASTM D2240	50 ± 5 Shore D
Tensile Strength, ASTM D412*	3500 ± 200 psi 24.13 ± 1.37 MPa
Elongation, ASTM D412*	400 ± 50%
Tear Resistance, ASTM D412*	450 ± 50 pli 78.8 ± 8.8 kNm
Service Temperature - Dry	-40°F to 250°F -40°C to 120°C
Service Temperature - Wet	40°F to 120°F 4.44°C to 48.89°C
Water Vapor Permeance (Procedure B) ASTM E96	0.361 perm-inch
Volatile Organic Compounds, (Side-A & B combined)	0 lbs/gal 0 gm/liter
Recommended Applied Thickness	> 2 mm
Return to Service: Foot Traffic	1- 4 hours
Return to Service: Full Service	> 24 hours
Taber Abrasion Resistance, ASTM D4060 (CS17 wheel, 1000 cycles, 1 kg load) (maximum)	6 mg loss
Water Absorption, ASTM D471 (maximum 74°F or 23°C, 24 hours)	< 0.5%
Crack Bridging, ASTM C1305 (10 cycles @ -15°F [-25.5°C], Rate 0.125 inch/hr, Ext. -0.125 inch)	Pass
Impact Resistance @ 77°F or 25°C (ASTM G14)	> 200 in. lbs
Pull-Off Strength (minimum), ASTM D4541: Inter-Coat Adhesion (within recoat time)	Excellent
Concrete (Shot Blasted Profile), substrate failure occurred	>500 psi (3.4 MPa)
Concrete (Primed), substrate failure occurred	>500 psi (3.4 MPa)
Steel (90 µm blast profile)	>900 psi (6.2 MPa)
Lineal Shrinkage	1 - 2%
Flexibility (1/8" 3mm Mendrel Bend Test), ASTM D1737	Pass
Resistance to Weathering, ASTM G-23 (Type QUV Weatherometer-3000 hrs exposure)	No cracking or blistering. Color change, gloss reduction & chalking are noted.

(*These physical properties from sample sprayed with Graco Foam Cat 200 @ 2000 psi minimum, with Gusmer GX7-400 mechanical purge gun @ 150-160°F. 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 Part-B.

Due to its aromatic composition, Polyeuro® 5502 FG will tend to yellow or darken in color and will become flat after exposure to UV light.

Coverage

Polyeuro® 5502 FG may be applied at any rate to achieve desired thickness. Theoretical coverage for 1 mil thickness is one gallon per 1600 sq. ft.

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, 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 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® on to 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® 5502 FG may not be diluted under any circumstances. Thoroughly mix Polyeuro® 5502 FG Side-B (Resin side) with air driven power equipment until a homogeneous mixture and color is obtained.

Application

Both Side-A and Side-B materials should be preconditioned to 75-80°F before application. Recommended surface temperature must be at least 5°F above the dew point.

Polyeuro® 5502 FG 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. Adequate pressure and temperature should be maintained at all times.

Polyeuro® 5502 FG should be sprayed in smooth, multidirectional passes to improve uniform thickness and appearance.

Storage

Polyeuro® 5502 FG 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



**POLYCOAT
PRODUCTS**

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TECHNICAL DATA SHEET

POLYEURO® 5502 FG

*Food Grade Two Component Aromatic
Polyurea Protective Coating*

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.

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