



**POLYCOAT
PRODUCTS**

A Division of American Polymers Corp.

TECHNICAL DATA SHEET

POLYEUREO® 5502-18PW

Two Component Aromatic Polyurea Protective Coating

Product Description

Polyeuro® 5502-18PW is ANSI/NSF 61 approved for direct contact with potable water. It 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. Its extremely fast gel time makes it suitable for applications down to -20°F (-28.89°C). 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® 5502-18PW offers a tack free time of less than forty-five seconds and exhibits 400% elongation upon curing with 50 Shore D hardness.

Features

- NSF/ANSI/CAN 61 Approved for Potable Water 
- Coat Pipe 10" In Diameter or Greater
- Coats Carbon or Mild Steel Metals without Primer
- Excellent Thermal Stability
- Good Chemical Resistance
- Installed With or Without Reinforcement in Transitional Areas
- Low Temperature Flexibility
- Meets USDA Criteria
- No Toxic Vapors
- Odorless
- Seamless
- Suitable for 500 Gallons (1890 Liters) Tanks and Larger

Typical Uses

- Aquatic Life Habitats and Venues
- Canals, Dams & Basins
- Cold Storage Facilities
- Industrial and Manufacturing Facilities
- Lakes, Ponds and Water Containment
- Live Stock Facilities and Dairy Farms
- Marine Exposure or Submersed Applications
- Offshore Rigs and Platforms
- Paper and Pulp Mills
- Potable Water Pipes
- Potable Water Tanks - Concrete or Metal
- Power Production Plants
- Structural Steel Corrosion Protection
- Tank Coatings
- Waste Water Treatment Linings
- Water Parks & Playgrounds

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

Mix Ratio by Volume	1A : 1B
Pot Life @ 150°F (65.5°C), 50% R.H.	4-6 seconds
Tack-Free Time (thickness & substrate temperature dependent)	30 -45 seconds
Recoat Time	0 - 6 hours
Viscosity at 150-160°F (65.5-71°C)	
Side-A	100 ± 20 cps
Side-B	50 ± 20 cps
Density (Side A & Side-B Combined)	8.80 lbs/gal
Flash Point	> 200°F (93.3°C)
Hardness, ASTM D2240	50 ± 5 Shore D
Tensile Strength, ASTM D412*	3000 ± 200 psi 20.683 ± 1.37 MPa
Elongation, ASTM D412*	400% ± 50%
Tear Strength, ASTM D624*	450 ± 50 pli 78.8 ± 8.8 kN/m
Service Temperature	
Dry	-40°F to 250°F -40°C to 121°C
Wet	40°F to 120°F 4.44°C to 48.89°C
VOC Content	0%
Recommended Applied Thickness	>2mm
Return to Service	
Foot Traffic	1-4 hours
Full Service	>24 Hours

*These physical properties from sample sprayed with Graco Foam Cat 200 @ 2000 psi minimum, with Gusmer GX7-400 mechanical purge gun @ 150-160°F (65°C to 71°C). 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.

Coverage

Polyeuro® 5502-18PW 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 substrates previously used, 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 other

contaminants. When coating substrates previously used, 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, and 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 3-4 mils. Prime and shoot Polyeuro® 5502-18PW 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® 5502-18PW may not be diluted under any circumstances. Thoroughly mix Polyeuro® 5502-18PW Side-B 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 (24-27°C) before application. Recommended surface temperature must be at least 5°F (3°C) above the dew point.

Polyeuro® 5502-18PW 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® 5502-18PW should be sprayed in smooth, multidirectional passes to improve uniform thickness and appearance.

Storage

Polyeuro® 5502-18PW 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.



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