POLYCOAT PRODUCTS
A Division of American Polymers Corp.

TECHNICAL DATA SHEET

POLYEURO® MPL-558

Two Component
Modified Polyurea Protective Coating

Product Description

Polyeuro® MPL-558 is a two component, 1:1, 100% solids, fast set, liquid applied, modified polyurea-liner system for metal, concrete, fiberglass and wood surfaces.

Features

- Abrasion and Impact Resistant
- Chemical Resistance
- High Build
- Low-Temperature Flexibility
- Quick Drying
- Seamless
- Tough and Elastomeric

Typical Uses

- Boat Linings
- Cargo Holds
- Cargo Liners
- Containment Areas
- Encapsulation of Fiberglass Bodies and Polystyrene Foams
- Horse Trailers
- Industrial Floorings
- Truck-Bed Liner
- Utility Vehicles
- Walkways
- Waterproof Decking

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

Colors

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

Due to its aromatic composition, Polyeuro MPL-558 will tend to yellow or darken in color and will become flat after exposure to UV light. Polyeuro MPL-558 may be top-coated within twelve hours of application with an aliphatic polyurethane/polyurea/polyaspartic coating for a colorfast finish.

Coverage

Polyeuro MPL-558 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 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.

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

Technical Data

Mix Ratio by Volume	1A : 1B
Pot Life @ 150°F (65.5°C), 50% R.H.	3-5-Seconds
Tack-Free Time (150 mils thickness)	20-30 Seconds
Recoat Time	0 - 6 hours
Viscosity at 150-160°F (66.5-71°C) **Side-A** **Side-B**	 120 ± 20 cps 200 ± 20 cps
Density (Side-A & Side-B Combined)	9.19 lbs/gal
Specific Gravity (Side-A & Side-B Combined)	1.10
Flash Point	> 200°F (93.3°C)
Hardness, ASTM D2240	55 ± 5 Shore D
Tensile Strength, ASTM D412*	2800 ± 200 psi 19.31 ± 1.37 MPa
Elongation, ASTM D412*	200% ± 20%
Tear Strength, ASTM D624*	400 ± 50 pli 69.93 ± 8.8 kNm
Service Temperature Dry	-20°F to 250°F - 4.0°C to 93°C

*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.

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.

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® MPL-558 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. Do not blast galvanized surfaces with an abrasive grit. 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. 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. 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® MPL-558 may not be diluted under any circumstances. Thoroughly mix Polyeuro® MPL-558 Side-B with air driven power equipment until a homogeneous mixture and color is obtained.

Application
Both Side-A and Side-B material should be preconditioned at 80-90°F (27-32°C) before application.

Recommended surface temperature must be at least 5°F (3°C) above the dew point.

Polyeuro® MPL-558 should be applied using a plural component, heated, high pressure 1:1 spray mixing equipment like Graco's Reactor, Exp-2 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 MPL-558 should be sprayed in smooth, multi-directional passes to improve uniform thickness and appearance.

Equipment Clean-Up
Equipment should be cleaned with an environmentally safe, urethane-grade solvent (alcohol free) as permitted under local regulations immediately after use.

Storage
Polyeuro® MPL-558 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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