POLYCOAT PRODUCTS
A Division of American Polymers Corp.

TECHNICAL DATA SHEET

POLYEURO® MH-872

Two Component Aromatic Hybrid Polyurethane Protective Coating

Product Description

Polyeuro® MH-872 is a fast set, rapid curing, aromatic, two component hybrid polyurea/polyurethane spray designed to be applied over EPS, wood, and many other surfaces with better heat stability and greater stiffness. Its excellent balance of stiffness and impact resistance provides excellent plastic "shell-like" protection for delicate foams and EPS. Polyeuro® MH-872's chemical design allows fast "user-friendly" application with excellent flow and appearance.

Features

- 100% Solids
- Excellent Chemical Protection
- Excellent Cold Temperature Impact
- Excellent Thermal Stability
- Fast Cure
- High Productivity
- Low Shrinkage
- Meets USDA Criteria
- Plastic "Shell-Like" Protection
- Zero VOC

Typical Uses

- Architectural Shapes
- Decorations / Props
- Dock Flotations
- Faux Rock
- Food-Processing Plants
- Speaker Boxes
- Steel Coating
- Wood Cabinets
- Wood Pallets / Crates

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

Due to its aromatic composition, Polyeuro® MH-872 will tend to yellow or darken in color and will become flat after exposure to UV light. Polyeuro® MH-872 may be topcoated within twelve hours of application with an ali-phatic polyurethane/polyurea coating for a colorfast finish.

Coverage

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.

Technical Data (Based on Draw Down Film)

Mix Ratio by Volume	1A : 1B
Pot Life @ 150°F (65.5°C), 50% R.H.	2-4 seconds
Tack Free Time (thickness & substrate temperature dependent)	30-45 seconds
Recoat Time	0-2 hours
Viscosity at 150-160°F (66.5-71°C) **Side-A** **Side-B**	 50 ± 20 cps 150± 50 cps
Density (Side-A & Side-B Combined)	9.5 lbs/gal
Flash Point	> 200°F (93.3°C)
Hardness, ASTM D2240	85 ± 3 D
Tensile Strength, ASTM D412*	4500 ± 200 psi 31.03 ± 1.37 MPa
Elongation, ASTM D412*	10 ± 5%
Tear Resistance, ASTM D412*	500 ± 50 pli 87.5 ± 8.7 kNm
Service Temperature - Dry	-40°F to 300°F 40°C to 120°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.

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 3-4 mils. Prime and shoot Polyeuro® onto any bare metal the same day as it is cleaned to minimize any potential flash rusting.

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. Contact Polycoat Products for recommended primer. 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.

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. Contact Polycoat Products for recommended primer.

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® MH-872 may not be diluted under any circumstances. Thoroughly mix Polyeuro® MH-872 Side-B (Resin side) 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® MH-872 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® MH-872 should be sprayed in smooth, multi-directional passes to improve uniform thickness and appearance.

Storage
Polyeuro® MH-872 has a shelf life of six (6) months 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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