

# TECHNICAL DATA SHEET

# POLYEURO® MH-752

Two Component Aromatic Hybrid Polyurethane Protective Coating

## **Product Description**

Polyeuro® MH-752 is a fast setting, rapid curing, aromatic, two component, hybrid-polyurea/polyurethane spray designed to be applied over EPS, wood and many other surfaces. Its excellent balance of stiffness and impact resistance provides excellent plastic "shell-like" protection for delicate foams and EPS. Polyeuro® MH-752's chemical design allows fast "userfriendly" application with excellent flow and appearance. Polyeuro® MH-752 offers a tensile strength of 3700 psi upon curing with 75 Shore D hardness.

## **Features**

- 100% Solids
- Excellent Chemical Resistance
- Excellent ColdTemperature and Impact Resistance
- 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
- Food Processing
- 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-752 will tend to yellow or darken in color and will become flat after exposure to UV light. Polyeuro® MH-752 may be topcoated within twelve hours of application with an aliphatic polyurethane/polyurea coating for a colorfast finish.

## Coverage

Polyeuro® MH-752 may be applied at any rate to achieve desired thickness. Theoretical coverage for 1 mil thickness is one gallon per 1600 sqft.

Technical Data	
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)	60-120 seconds
RecoatTime	0 - 12 hours
Viscosity at 150-160°F (65.5-71°C) Side-A Side-B	90 ± 20 cps 160 ± 20 cps
Density (Side-A & Side-B Combined)	9.03 lbs/gal
Flash Point	> 200°F (93.3°C)
Hardness, ASTM D2240	75 ± 5 D
Tensile Strength, ASTM D412*	3700 ± 200 psi 25.51 ± 1.37 MPa
Elongation, ASTM D412*	30 ± 10%
Tear Strength, ASTM D624*	450 ± 50 pli 78.8 ± 8.8 kNm
Service Temperature - Dry	-20°F to 250°F

\*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.

## **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 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

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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.

## **Vixing**

Polyeuro® MH-752 may not be diluted under any circumstances. Thoroughly mix Polyeuro® MH-752 Side-B material 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 before application.

Recommended surface temperature must be at least 5°F above the dew point.

Polyeuro® MH-752 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 MH-752 should be sprayed in smooth, multidirectional passes to improve uniform thickness and appearance.

## **Storage**

Polyeuro® MH-752 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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