

### PRODUCT DESCRIPTION

PloyGhard 3000 is a two component, 1:1, 100% solids, fast set, liquid applied, modified polyurea liner system for metal, concrete, fiberglass and wood surfaces.

### FEATURES

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

### TYPICAL USES

- Vapor Barrier
- Utility Vehicles
- Cargo liners
- Boat Linings
- Waterproof Decking
- Encapsulation of Fiberglass Bodies and Polystyrene Foams
- Cargo Holds
- Horse Trailers
- Industrial Floorings
- Walkways
- Containment Areas

### COLORS

Clear/Neutral or Black. Custom colors are available upon request. Color Packs, when used, must be added to Part-B. Due to its aromatic composition, PloyGhard 3000 will tend to yellow or darken in color and will become flat after exposure to UV light. PloyGhard 3000 may be topcoated within twelve hours of application with an aliphatic polyurethane/polyurea coating for a colorfast finish.

### PACKAGING

10 gallon kit: 5 gallons (47 lbs. net) Side-A (Isocyanate side) and 5 gallons (43 lbs. net) Side-B (Resin side).  
100 gallon kit: 50 gallons (473 lbs. net) Side-A (Isocyanate side) and 50 gallons (neutral: 433 lbs. net, black: 435 lbs. net) Side-B (Resin side)

### PACKAGING

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

### COVERAGE

PloyGhard 3000 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 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. Ghemco recognizes the potential for unique substrates from one project to another. The following information is for general reference, and for project-specific questions, contact Ghemco.

#### *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 thorough-

ly, 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, Ghemco DuraGhard Base Coat II 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  
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 Ghemco DuraGhard Base Coat II with sand.

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 PolyGhard 3000 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**

PolyGhard 3000 may not be diluted under any circumstances. Thoroughly mix PolyGhard 3000 Part-B (Resin side) with air driven power equipment until a homogeneous mixture and color is obtained.

### **APPLICATION**

Both Part-A and Part-B material should be preconditioned at 80-90°F before application. Recommended surface temperature must be at least 5°F above the dew point. PolyGhard 3000 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 Part-A and Part-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. PolyGhard 3000 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**

PolyGhard 3000 has a shelf life of six (6) months from date of manufacture, in factory-sealed containers. Part-A and Part-B drums must be stored above 60°F. Avoid freezing temperatures. Store drums on wooden pallets to avoid direct contact with the ground. If stored for a long period of time, rotate Part-A and Part-B drums regularly.

### **LIMITATIONS**

Do not open until ready to use. Both Part-A and Part-B containers must be fitted with a desiccant device during use.

**WARNING**

This product contains Isocyanates and Curative Material.

TECHNICAL DATA			
Mix Ratio by Volume	1A : 1B	Flash Point	>200°F
Pot Life @ 150°F	2-4 seconds	Hardness, ASTM D-2240*	55 ± 5 Shore D
Tack Free Time (150 mils Thick)	10-30 seconds	Tensile, ASTM D-412*	3000 ± 300 psi
Recoat Time	0 - 12 hours	Elongation, ASTM D-412*	200 ± 20%
Viscosity at 150-160°F (66.5-71°C), Brookfield: Part-A Part-B	120 ± 20 cps 200 ± 20 cps	Tear, ASTM D-624*	400 ± 40 pli
Density (Side A & B Combined)	9.13 lbs/gal	Service Temperature	-20°F to 250°F
Specific Gravity (Side-A & B Combined)	1.10	-	-
(*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.			

Please read all information in the general guidelines, technical data sheets, application guide, and safety data sheets (SDS) before applying material. Published technical data and instructions are subject to change without notice. Contact your local GHEMCO representative or visit our website for current technical data and instructions. **DISCLAIMER:** All guidelines, recommendations, statements, and technical data contained herein are based on information and tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. It is the user's responsibility to satisfy himself, by his own information and tests, to determine suitability of the product for his own intended use, application and job situation and user assumes all risk and liability resulting from his use of the product. We do not suggest or guarantee that any hazards listed herein are the only ones that may exist. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements, whether verbal or in writing, other than those contained herein shall not be binding upon the manufacturer, unless in writing and signed by a corporate officer of the manufacturer. Technical and application information is provided for the purpose of establishing a general profile of the material and proper application procedures. Test performance results were obtained in a controlled environment and GHEMCO makes no claim that these tests or any other tests, accurately represent all environments.