TURBO-LINER® MPL 55

Two Component Modified Polyurea Protective Coating

DESCRIPTION

Turbo-Liner® MPL 55 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

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

COLOR

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, Turbo-Liner® MPL 55 will tend to yellow or darken in color and will become flat after exposure to UV light. Turbo-Liner® MPL 55 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

Turbo-Liner® MPL 55 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. Turbo Products recognizes the potential for unique substrates from one project to another. The following information is for general reference, and for project-specific questions, contact Turbo Products.

TECHNICAL DATA

Mix Ratio, by volume	1A:1B
Pot Life @ 150°F	2-4 seconds
Tack Free Time (150 mils Thick)	10-30 seconds
Recoat Time	0-12 hours
Viscosity at 150-160°F (65.5-71°C), Brookfield:	
Side-A	120 ± 20 cps
Side-B	190 ± 20 cps
Density (Side-A & B Combined)	9.17 lbs/gal
Specific Gravity (Side-A & B Combined)	1.10
Flash Point	>200°F
Hardness, ASTM D-2240*	55 ± 5 Shore D
Tensile, ASTM D-412*	2700 ± 300 psi
Elongation, ASTM D-412*	200 ± 40%
Tear, ASTM D-624*	350 ± 40 pli
Service Temperature	-20°F to 250°F
Water Vapor Permeability, ASTM E-96	0.340 perm-inch
VOC Content	0 gm/lit
Recommended Applied Thickness	> 2 mm
Return to Service: Foot Traffic	1-4 hours
Return to Service: Full Service	> 24 hours
Taber Abrasion Resistance, ASTM D4060	
(CS17 wheel, 1000 cycles, 1 kg load)(maximum)	8.6 mg loss
Water Absorption, ASTM D471	
(maximum 23°C, 24 hours)	<0.5%
Crack Bridging, ASTM C836	
(-25°C, 1.6mm crack, 25 cycles)	Pass
Impact Resistance @ 25°C (ASTM G14)	>200lbs
Pull-Off Strength (minimum), ASTM D4541:	
Inter-Coat Adhesion (within recoat time)	Excellent
Concrete (Shot blast profile), substrate failure occurred	>500psi
Concrete (Primed), substrate failure occurred	>500psi
Steel (75-100 micron blast profile)	>900psi
Lineal Shrinkage	1-2%
Flexibility 1/8"(3mm) Mandrel Bend Test, ASTM D1737	Pass
Resistance to Weathering, ASTM G-23	
(Type QUV Weatherometer-3000 hrs exposure)	No cracking or blistering. Color change, gloss reduction & chalking are noted.

(*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.)

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.

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.

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 Turbo-Liner® MPL 55 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

Turbo-Liner® MPL 55 may not be diluted under any circumstances. Thoroughly mix Turbo-Liner® MPL 55 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.

Turbo-Liner® MPL 55 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.

Turbo-Liner® MPL 55 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

Turbo-Liner® MPL 55 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.

Please read all information in the general guidelines, product data sheets, guide specifications and material safety data sheets (MSDS) before applying material. Published technical data and instructions are subject to change without notice. Contact your local Turbo Products representative or visit our website for current technical data and instructions.