TECHNICAL DATA SHEET
TURBO LINER® MPL 11
Two Component Modified Polyurea Protective Coating

Revised (4-19)

Product Description

Turbo Liner® MPL 11 is a two component, 1:1, 10 0% solids, fast set, liquid applied, modified polyurea liner system for metal, concrete, fiberglass and wood surfaces.

FEATURES

» Seamless
» Tough and Elastomeric
» Chemical Resistant
» 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

PACKAGING

10-gallon kit	5 gallons (47 lbs. net) Part-A (Isocyanate side) 5 gallons (43 lbs. net) Part-B (Resin side).
100 gallon kit:	50 gallons (477 lbs. net) Part- A (Isocyanate side) 50 gallons Part-B (Resin side) (neutral: 426 lbs. net; black: 420 lbs. net)

Colors

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

Due to its aromatic composition, Turbo Liner® MPL 11 will tend to yellow or darken in color and will become flat after exposure to UV light. Turbo Liner® MPL 11 may be topcoated within twelve hours of application with an aliphatic polyure-thane/polyurea coating for a colorfast finish.

Coverage

Turbo Liner® MPL 11 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 Liner recognizes the potential for unique substrates from one project to another. The following information is for general reference. For project-specific questions, contact Turbo Liner.

NEW AND OLD CONCRETE

Refer to SS PC-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

TECHNICAL DATA (BASED ON DRAW DOWN FILM)

Mix Ratio by Volume	1A : 1B
Pot Life	5-10 seconds
Tack Free Time	40-60 seconds
Recoat Time	0-6 hours
Viscosity at 150-160ºF (66.5-71ºC) , Brookfield: **Side-A** **Side-B**	 160 ± 20 cps 40 ± 20 cps
Density (Side A & Side B Combined)	8.55 lbs/gal
Flash Point	> 200°F (93.3°C)
Hardness, ASTM D-2240	90 ± 5 Shore A
Tensile Strength, ASTM D-412*	3200 ± 300 psi 22.04 ± 2.07 MPa
Elongation, ASTM D-412*	450 ± 50%
Tear, ASTM D-412*	325 ± 50 pli 56.82 ± 8.74 kNm
Service Temperature **Dry** **Wet**	 -40ºF - 250ºF 40ºF - 120ºF
VOC Content	0gm/l
Recommended Applied Thickness	>2mm
Return to Service: **Foot Traffic** **Full Service**	 2-4 hours 10-24 hours
Taber Abrasion Resistance, ASTM D44060 (CS17 wheel, 1000 cycles, 1kg load)(maximum)	33 mg loss
Water Asorption, ASTM D471 (Maximum 23ºC, 24 hours)	<1.0
Crack Bridging, ASTM C836 (-25ºC, 1.6mm crack 25 Cycles)	Pass
Pull off Strength (Minimum) ASTM D4541 **Inter-Coat Adhesion (Within recoat time)** **Concrete (Shot-blasted profile) Substrate Failure** **Concrete (Primed) Substrate Failure at** **Steel (um blast profile)**	 Excellent >500 psi >500 psi >900 psi
Lineal Shrinkage	1-2%
Flexibility (3mm Mendrel Bend Test) ASTM D1737	PASS
Resistance to Weathering, ASTM G-23 Type QUV Weatherometer-2000 hrs exposure	No cracking or blistering Gloss reduction & Minor 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.)

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, Turbo Liner 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 D425 8 - 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 Turbo Liner 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 Turbo Liner® 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 Turbo Liner 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 Turbo Liner 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

Turbo Liner® MPL 11 may not be diluted under any circumstances.Thoroughly mix Turbo Liner® MPL 82 Part-B (Resin side) with air driven power equipment until a homogeneous mixture and color is obtained.

Application

Both Side-A and Side-B materials should be preconditioned to 75-80°F before application.

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

Turbo Liner® MPL 11 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 11 should be sprayed in smooth, multidirectional passes to improve uniform thickness and appearance.

Storage

Turbo Liner® MPL 11 has a shelf life of six (6) months from date of manufacture, in factory-sealed containers.

Part-A and Part-B drums are recommended to 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.