



Ultimate Linings

UL FR 22 Fire Retardant Two Component Modified Polyurea Protective Coating

DESCRIPTION

UL FR 22 is a Class 1 fire-rated, two component, 1:1, 100% solids, fast set, liquid applied, modified polyureas liner system for metal, concrete, fiberglass and wood surfaces.

FEATURES

Meets ASTM E-84 Class 1 Fire Test Criteria / Seamless / High Build / Tough and Elastomeric / Quick Drying
Chemical Resistant / Low Temperature Flexibility / Abrasion and Impact Resistant /

TYPICAL USES

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

COLOR

Clear/Neutral. Custom colors are available upon request. Color Packs, when used, must be added to Part-B. Due to its aromatic composition, UL FR 22 will tend to yellow or darken in color and will become flat after exposure to UV light. UL FR 22 may be top coated within twelve hours of application with an aliphatic polyurethane/polyurea coating for a colorfast finish.

PACKAGING

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

COVERAGE

UL FR 22 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. UL recognizes the potential for unique substrates from one project to another. The following information is for general reference, and for project-specific questions, contact UL.

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 shot blasting 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, UL BC-371 or a mixture of UL PM 32 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:

6630 Roxburgh Dr. #175 * Houston, TX 77041 * 281-598-5030 * Fax 713-937-0052
www.ultimatelinings.com

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 UL BC-371 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 2-3 mils. Prime and shoot UL 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 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. 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 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

UL FR 22 may not be diluted under any circumstances. Thoroughly mix UL FR 22 Part-A and Part-B 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 90-100°F before application. Both Side-A and Side-B materials should be continuously agitated before and during application. Agitate at least one hour prior to application using heavy duty drum agitator. Both Side-A and Side-B lines must have filters removed. Use a round pattern disc for spraying. Orifice diameter must be 0.042" or greater. Recommended surface temperature must be at least 5°F above the dew point. UL FR 22 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. **UL FR 22** should be sprayed in smooth, multidirectional passes to improve uniform thickness and appearance.

STORAGE

UL FR 22 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, 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
Pot Life @ 160°F (71°C)	3 - 6 seconds
Tack Free Time (150 mils thick)	10-30 seconds
Recoat Time	0-12 hours
Viscosity @ 150-160°F (65.5-71°C), Brookfield:	
Side-A	150 ± 50 cps
Side-B	200 ± 20 cps
Density (Side-A & B Combined)	13.03 lbs/gal
Flash Point	>200°F
Hardness, ASTM D-2240*	50 ± 5 Shore D
Tensile, ASTM D-412*	1600 ± 200 psi
Elongation, ASTM D-412*	45 ± 20%
Tear, ASTM D-624*	350 ± 20 pli
Service Temperature	-20°F to 250°F
(*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, 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 Ultimate Linings Products representative or visit our website for recently updated instructions and data.

Limited Warranty

Ultimate Linings Products warrants its products to be free from manufacturing defects and that they will meet Ultimate Linings Products current published physical properties. Ultimate Linings Products warrants that its products, when properly installed by a state licensed waterproofing contractor according to Ultimate Linings Products guide specifications and product data sheets over a sound, properly prepared substrate, will not allow water migration for a period of one (1) year. Sellers and manufacturers sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. There are no other warranties by Ultimate Linings Products of any nature whatsoever expressed or implied, including any warranty of merchantability of fitness for particular purpose in connection with this product. Ultimate Linings Products shall not be liable for damages of any sort, including remote or consequential damages resulting from any claimed breach of any warranty whether expressed or implied. Ultimate Linings Products shall not be responsible for use of this product in a manner of infringing on any patent held by others. In addition, no warranty or guarantee is being issued with respect to appearance, color, fading, chalking, staining, shrinkage, peeling, normal wear and tear or improper application by the applicator. Damage caused by abuse, neglect and lack of proper maintenance, acts of nature and/or physical movement of the substrate or structural defects are also excluded from the limited warranty. Ultimate Linings Products reserves the right to conduct performance tests on any material claimed to be defective prior to any repairs by owner, general contractor, or applicator.

DISCLAIMER

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