

# LMX-UB TM ELASTOMERIC POLYUREA

# **DESCRIPTION**

LMX-UB™ This economical polymer exhibits low tensile strength and very high elongation (>700%) while providing a tenacious bond to certain thermoset plastic surfaces. Adheres to many polymeric substrates, both new and aged, typically without the use of primers or extensive surface preparation. LMX-UB™ was stretched and relaxed at 30 pulls per minute, double the samples original length, more than 530,000 times before breaking. LMX-UB™ is excellent to bridge stress cracks in concrete and other substrates. It contains no tar, asphalt, or VOCs. It can be walked on in minutes and is usually back-filled in less than one hour.

#### **FEATURES**

- 100% solids. No solvents. No VOCs.
- Fast-set: handle within fifteen minutes or less.
- It can be built up to any thickness in one application.
- High dry temperature stability to 200° F (93°C) with intermittent temperatures to 250° F (121°C).
- High-elongation for crack bridging.
- Excellent encapsulation characteristics.

#### **RECOMMENDED USES**

- New or existing sub-grade slabs, walls, etc.
- Rust encapsulation
- Encapsulation for asbestos, lead paint, or other dry hazardous materials (Consult SPI)
- Buried earthen containment lining used with geotextile fabric
- In between slab waterproofing
- Liner for ponds, lagoons, reservoirs, dikes, irrigation ditches, tunnels, barges, etc.
- Seamless roofing membrane

# **COLORS**

LMX-UB™ is available in SPI standard colors (Sand, Medium Grey, and Black). Custom colors will be quoted upon request. It should be noted that LMX-UB™ is an <u>aromatic</u> polyurea; therefore, as with all aromatics, color change, and superficial oxidation will occur.

<u>Aliphatic</u> urethane, polyurea, and other approved aliphatic topcoats can be used when long-term color stability and increased longevity in full sun exposure are of critical importance.

WET PROPERTIES @ 77°F (25°C)	
Solids by Volume	100%
Solids by Weight	100%
Volatile Organic Compounds	0 lbs/gal (0g/l)
Theoretical Coverage DFT	100 sq. ft. @ 16 mils/gal.
Weight per gallon (approx.)	8.55 lbs. (3.87 kg)
Number of Coats	1-2
Mix Ratio	1 "A": 1 "B"
Viscosity (cps) @ 77° F (25 °C)	A: 800 approx. B: 600 approx.
Shelf Life Unopened Containers @ 60-90°F (15-32°C)	Six months

Minimum material/container temperature for spray application is 70°F (21 °C).

DRY PROPERTIES @ 55 mils (1.5mm)*	
Tensile Strength ASTM D 638	>2600 psi (19.46 mpa)
Elongation ASTM D638	>750%
Hardness (Shore A) ASTM D2240-81	±87
Hardness (Shore D) ASTM D2240-81	±41
100% Modulus ASTM D 638	>650 psi ±10 (4.52 mpa)
300% Modulus ASTM D 638	>1100 psi ±20 (7.65 mpa)
Tear Resistance ASTM D 624	>343 pli (60.194 KN/m)

CURING SCHEDULE	
Gel	8 sec. (±)
Tack Free	22 min (±)
Post Cure**	24 hours
Recoat	30 min - 8 hours
Service Temperature	-60°F - +200°F (-50°C - +93°C)

\*All cured film properties are approximate since processing parameter, ad-mixture types, and quantities change physical properties of the cured elastomer. All samples for above tests were force cured or aged for more than three weeks. It is recommended that the user perform their own independent testing.

\*\*Complete polymerization to achieve final strength can take up to several weeks, depending on a variety of conditions. The samples for tests were sprayed with SPI-Gusmer 20/35 @ 3,000 psi (20.85 mpa) dynamic pressure. Primaries/Hose Heat 170°F (77°C) Gap Pro Gun with 000 mixing chamber.

# **GENERAL APPLICATION INSTRUCTIONS**

Apply LMX-UB™ to only clean, dry, sound surfaces free of loose particles or other foreign matter. A primer may be required, subject to type and/or condition of the substrate. Consult technical service personnel for specific primer recommendations and substrate preparation procedures.

LMX-UB  $^{\text{TM}}$  can be sprayed over a broad range of ambient and substrate temperatures.

The limitations are in the ability of the application equipment to provide adequate material pressure and heat. Contact technical

service personnel for specific recommendations, pricing, and availability of spray and auxiliary equipment.

It is recommended that LMX-UB $^{\text{TM}}$  be sprayed in multi-directional (north-south/east-west) passes to ensure uniform thickness.

The polyol "B" component must be thoroughly power mixed each day, prior to use. Contact a SPI technician regarding proper mixing equipment.

Follow instructions attached to "A" and "B" containers.

#### RECOMMENDED EQUIPMENT AND SETTINGS

- Standard 1:1 ratio, heated, plural-component equipment developing a minimum of 2000 psi (8.34 mpa) dynamic pressure with heating capabilities to 175°F (79°C) will adequately spray this product. These include Graco 20/35, 20/35 Pro, H-2000, H-3500, HV-20/35, Reactor A-20, E-20, E-30, E-XP1, E-XP2, H-25, H-40, H-XP2, H-XP3, SPI 18/18 and SPI Gusmer 25/25. Gun models include Fusion MP, Gap Pro, Glass Craft P2, P2 Elite, P2 Elite "C", P3, Gusmer D7, GX-7 DI, and GX-7-400 gun.
- Pre-heater temperature should be at 160-170°F (71-76°C).
- Hose temperature should be at 160-170°F (71-76°C). A hose thermometer inserted under the insulation near the gun should read a minimum of 145-155°F (63-68°C).
- Physical properties will be enhanced when sprayed at higher pressure (2000 psi or more) (13.9 mpa), utilizing an impingement mix gun such as the MP Fusion or GX7-DI.

#### **MIXING AND THINNING**

Thinning is not required. Using any thinner may adversely affect product performance.

#### **GENERAL SAFETY, TOXICITY & HEALTH DATA**

Material Safety Data Sheets are available for this coating material. Any individual who may come in contact with these products should read and understand the M.S.D.S. **CHEMTREC EMERGENCY NUMBER 1-800-424-9300** 

**WARNING:** Contact with skin or inhalation of vapors may cause an allergic reaction. Avoid eye contact with the liquid or spray mist. Hypersensitive persons should wear protective clothes, gloves and use protective cream on face, hands and other exposed areas.

CLEAN UP: Use DPM, NMP, and Polyclean.

**CONTAMINATION:** Avoid moisture contamination in containers. Containers should not be resealed if contamination is suspected, carbon dioxide created pressure can develop. Do not attempt to use contaminated material.

**EYE PROTECTION:** Safety glasses, goggles, or a face shield are recommended

**SKIN PROTECTION:** Chemical resistant gloves are recommended. Cover as much of the exposed skin area as possible with appropriate clothing.

**RESPIRATORY PROTECTION:** Use a respirator approved for isocyanates and organic vapors. If you are not sure or not able to

monitor levels, or if you are spraying in an enclosed/indoor area use MSHA/NIOSH approved supplied air respirator. Consider the

application and environmental concentrations when deciding if additional protective measures are necessary.

**INGESTION:** Do not take internally. It is believed that ingestion of polymeric isocyanates would not be fatal to humans, but may cause inflammation of mouth and stomach tissue.

#### **LIMITATIONS**

- This product is for professional use only.
- Minimum material/container temperature for spray application is 70°F (21 °C).
- Liquid temperature in drums during application 70°F (21°C) 100°F (38°C).
- Apply LMX-UB™ when surface and air temperatures are above 40°F (5°C) and rising, and 7°F (-13°C) above dew point.
- Avoid moisture contamination in containers. Containers should not be resealed if contamination is suspected, CO<sub>2</sub> created pressure can develop. Do not attempt to use contaminated material.
- Undried air exposed to liquid components will reduce physical properties of the cured coating.

**Note:** The material supplied is two components (Component "A"/Component "B") used to formulate LMX-UB  $^{\text{TM}}$ . The quality and characteristics of the finished polymer is determined by the mixture and application of the two components.

# **WARRANTY & DISCLAIMER**

Specialty Products, Inc. has no role in the manufacture of the finished polymer other than to supply its two components. It is vital that the person applying this product understands the product, and is fully trained and certified in the use of plural-component equipment.

Specialty Products, Inc., an Alaska corporation, warrants only that the two components of this product shall conform to the technical specifications published in the product literature.

The quality and fitness of the product are dependent upon the proper mixture and application of the components by the applicator. There are no warranties that extend beyond the description on the face of this instrument.

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Product & Equipment Technical Assistance 24 hours – 7 days a week (800) 627-0773

