

ELASTUFF 220

PURE ALIPHATIC POLYASPARTIC
POLYUREA FINISH

Technical Data & Application Instructions

PRODUCT DESCRIPTION

ELASTUFF 220 is a premium performance, high solids coating manufactured using pure aliphatic polyaspartic polyurea resins. It forms a highly cross-linked, durable membrane exhibiting excellent gloss and color retention. ELASTUFF 220 was formulated to achieve an ideal balance of physical properties, including exceptional tensile strength, tear strength and hardness, while maintaining excellent flexibility. Its high durometer finish also exhibits outstanding chemical, abrasion, impact and heat resistance.

ELASTUFF 220 can be applied using conventional or airless spray equipment, notched trowel or squeegee, as well as brush or roller for small or confined areas. It can be used on its own, or as a topcoat over other polyurea, polyurethane or hybrid elastomers.

ELASTUFF 220 is a 2-component, highly cross-linked coating, providing a dense, tight film with good chemical resistance to a wide range of acids and bases. It also exhibits excellent hydrolytic stability to withstand a wide range of temperature extremes, in dry or aqueous environments.

BASIC USES

ELASTUFF 220 was especially developed as a superior UV and color stable finish for protecting a wide variety of vertical substrates from abrasion and corrosion. It is an ideal choice for protecting aromatic basecoats from extended exterior exposure, or for use on its own over primed steel, concrete, masonry and fiberglass substrates.

Although it is primarily designed for use on vertical surfaces, ELASTUFF 220 can also be used on horizontal surfaces, wherever a tough, ultraviolet resistant coating is desired. It is an excellent finish for protecting structural steel on tank exteriors, bridges, equipment, railings, and plant maintenance applications. It also makes an ideal topcoat for use in secondary containment, water slides, pools and fountains, industrial floors, hangars, stadiums, decks, balconies and lanais.

ELASTUFF 220 also provides a durable, color stable finish for decorative items such as artificial landscapes, stage props, art objects, etc.

TYPICAL PROPERTIES

- Ratio:**
1:1 By Volume
- Solids By Weight:**
80% [ASTM D1644]
- Solids By Volume:**
76% [ASTM D2697]
- Weight Per Gallon:**
Part A = 9.5 lbs. (4.3 kg)
Part B = 8.8 lbs. (4.0 kg)
- Gel Time:**
1 Hour @ 75°F (24°C), 50% R.H.
- Dry Time:**
3 Hours @ 75°F (24°C), 50% R.H.
- Cure Time:**
72 Hours
- Ultimate Tensile Strength:**
5,300 psi (±500) (37 MPa) @ 75°F (24°C)
[ASTM D412]
- Elongation at Break:**
15% (±2) @ 75°F (24°C) [ASTM D412]
- Hardness:**
80 to 85 Shore D [ASTM D2240]
- Adhesion:**
Primed Concrete: 500 to 1,700 psi (±50) (3,448 to 11,724 kPa) *Cohesive failure within concrete*
Primed Steel: 2,000 psi (± 50) (13,793 kPa)
- High Temperature Stability:**
No age hardening or slump
- Cold Temperature Flexibility:**
Passes ¼" (6 mm) mandrel bend at -4°F (-20°C)
(Federal Test Method No. 141a-6221)
- Temperature Limits For Normal Service Conditions**
-30°F to 180°F (-35°C to 82°C)

COLORS

ELASTUFF 220 is available in standard White, Light Gray and Clear. An unlimited selection of custom colors is also available to meet specific project requirements. Color chips or samples must be furnished to UNITED for all custom colors.

SHELF LIFE

The shelf life of ELASTUFF 220 in unopened containers is 12 months from date of shipment from UNITED'S factory.

PACKAGING & MIXING

ELASTUFF 220 is a two-component, 1:1 ratio material available in 1-gallon (3.8 liter) cans, 5-gallon (19 liter) pails and 55-gallon (208 liter) drums. Blend equal volumes of Part A and Part B using a mixer with a blade capable of uniformly mixing the entire container. If blending, do not mix more material than can be applied within 1 hour. Thinning or reducing the material is not recommended.

SURFACE PREPARATION

All surfaces must be clean and dry, and free from dirt, grease, oils, curing or release agents, soapy films, pollution fallout, surface chemicals, unsound rust, scale, loose paint or coating, and other contaminants that may interfere with optimum adhesion.

Glossy surfaces must be dulled by abrading the surface using brush blasting, sanding or other mechanical means. Chalky, oxidized or other contaminated surfaces must be washed with **United Cleaning Concentrate (UCC)** or equivalent biodegradable cleaner. Heavy deposits of dirt or contamination may require agitation with a stiff-bristle broom or similar mechanical scrubber.

Metal surfaces must be free of rust scale, forming oils, metal slivers and weld slag, and chemically cleaned or blast abraded as per specific project requirements.

The cleaned or blasted surface shall be primed by the end of the same workday, but in any event before any visible rusting occurs. Prime with **UNITED'S Lock-Down** or **Primer 302** applied at approximately 300 sq. ft. per gallon (7.3 m²/l). If rusting occurs after cleaning, the surfaces must be recleaned prior to coating.

Concrete surfaces must be free from curing and form release agents, surface chemicals, sharp projections, ridges and loose aggregate. Restore any loose aggregate using **Uni-Crete** or similar polymer modified cement patching or resurfacing compound. Concrete surfaces having a smooth, steel trowelled finish should be acid etched or sandblasted. Prime concrete with **UNITED'S Uni-Tile Sealer LV** at the rate of 400 to 500 sq. ft. per gallon (9.7 to 12.2 m²/liter), reducing as necessary depending on the porosity of the substrate. See separate Surface Preparation Technical Bulletin or individual product Technical Data Sheets for additional surface preparation and primer application instructions.

ELASTUFF 220 adheres directly to most clean fiberglass and plastic surfaces. New or dense surfaces should be scuff-sanded prior to priming.

COATING APPLICATION

ELASTUFF 220 may be applied using standard conventional or airless spray, notched trowel or squeegee, and brush or roller. Airless spray is the preferred method. A reversible, self-cleaning spray tip with an orifice size of .015" to .021" (.38 to .53 mm) and minimum 40 degree fan angle is recommended. Regardless of the application method, do not exceed 10 wet mils (254 microns) per coat.

Coverage rate will vary depending upon the substrate, its surface profile and porosity. One or two coats, applied at the rate of 200 to 250 sq. ft. per gallon (4.9 to 6.1 m²/l), are usually sufficient for protecting most surfaces. As a topcoat over aromatic basecoats, or for light duty service, a single coat is normally adequate.

During application, take care to maintain a wet edge. For best results, always continue application to natural termination points such as corners or joints. Use fine mesh filters in the pump and gun. Thinning or reducing **ELASTUFF 220** is not normally required. If a lower viscosity is desired, thin up to 5% with M.E.K.

A second coat of **ELASTUFF 220** can be applied as soon as the first coat has thoroughly dried, and should normally be completed within 48 hours of application of the first coat. Surfaces that have become contaminated must be cleaned prior to topcoating.

Use M.E.K. or Methylene Chloride to flush equipment. Purge the cleaning solvent from the system using Mineral Spirits or Glycol Ether prior to extended storage.

LIMITATIONS & PRECAUTIONS

ELASTUFF 220 components are affected by moisture prior to catalyzation and must be protected from moisture contamination. After opening and if all components are not used, purge with nitrogen or dry air and tightly sealed to protect the components from moisture contamination. Keep all containers tightly closed during storage.

Use only in a well ventilated area. Avoid breathing of vapor or spray mist. For exterior applications, approved (MSHA/NIOSH) chemical cartridge respirator must be worn by applicator and personnel in vicinity of application. If used indoors, provide mechanical exhaust ventilation and air line masks or positive pressure hose masks. Avoid contact with eyes and contact with skin.

For specific information on safety requirements. Refer to OSHA guidelines and **ELASTUFF 220** Material Safety Data Sheet.



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