

ELASTUFF 200

PURE ALIPHATIC POLYUREA TOPCOAT

Technical Data & Application Instructions

PRODUCT DESCRIPTION

ELASTUFF 200 is a high performance, 100% solids, pure polyurea elastomer coating manufactured using pure aliphatic isocyanate resins reacted with amine pre-polymers. It cures rapidly to form a highly durable membrane exhibiting excellent gloss and color retention. ELASTUFF 200 was formulated to achieve an ideal balance of physical properties, including exceptional tensile strength, tear strength and elongation. Its high durometer finish also exhibits high chemical, abrasion and impact resistance. ELASTUFF 200 is a fast cure material, applied using heated plural-component spray equipment. It can be used on its own, or as a topcoat over other polyurea, polyurethane or hybrid elastomers.

ELASTUFF 200 is a 2-component, highly crosslinked 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. Because of its rapid gel time, ELASTUFF 200 can be applied in high humidity areas without fear of blistering or film cellularity.

BASIC USES

ELASTUFF 200 was especially developed as a superior UV stable topcoat for protecting a wide variety of vertical and horizontal substrates. 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.

ELASTUFF 200 can be used wherever a tough, ultraviolet resistant coating is desired, including secondary containment, water slides, pools and fountains, industrial floors, as well as pedestrian and vehicular traffic decks. It can also be used for protecting exterior structural steel such as bridges, buildings, tanks, equipment, etc. ELASTUFF 200 also provides a color stable surface for decorative items such as artificial landscapes, stage props, art objects, etc.



TYPICAL PROPERTIES

- Solids By Weight:**
100% [ASTM D1644]
- Solids By Volume:**
100% [ASTM D2697]
- Weight Per Gallon:**
Part A = 7.9 lbs. (3.6 kg)
Part B = 7.6 lbs. (3.5 kg)
- Gel Time:**
10 seconds @ 75°F (24°C), 50% R.H.
- Tack Free Time:**
5 minutes @ 75°F (24°C), 50% R.H.
- Cure Time:**
90% @ 24 hours
- Ultimate Tensile Strength:**
2,700 psi (± 100) (19 MPa) @ 75°F (24°C)
[ASTM D412]
- Elongation at Break:**
600% (± 50) @ 75°F (24°C) [ASTM D412]
- Tear Strength:**
425 pli (± 50) (74.5 Kn/m)
- Hardness:**
45 to 50 Shore D [ASTM D2240]
- Abrasion Resistance:**
0.6 mg loss using 1,000 gm weights at 1,000 revolutions on Taber Abraser [ASTM D4060]
- Adhesion:**
Primed Concrete: 900 psi (± 50) (6.2 kPa)
Primed Steel: 700 psi (± 50) (4.8 kPa)
[ASTM D4541]
- Permeance:**
0.2 U.S. Perms @ 12 mils (305 microns)
[ASTM D1653]
- High Temperature Stability:**
No age hardening or slump
- Cold Temperature Flexibility:**
Passes ¼" (6 mm) 180° mandrel bend at -15°F (-26°C) [Federal Test Method No. 141a-6221]
- Volatile Organic Content (VOC):**
0 g/liter [Calculated]
- Temp. Limits For Normal Service Conditions:**
-30°F to 200+°F (-35°C to 93+°C)

COLORS

ELASTUFF 200 is available in standard White and Light Gray. A limited selection of custom colors is also available to meet specific project requirements.

PACKAGING & MIXING

ELASTUFF 200 is a two-component, fast cure material available in 5-gallon (19 liter) pails and 55-gallon (208 liter) drums. Mix each component prior to use using a mixer with a blade capable of uniformly mixing the entire container. Once mixed, use drum mixers or recirculation to maintain a homogenous consistency.

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 shall be chemically cleaned and/or blast abraded according to the specific project requirements.

The cleaned or blasted surface shall be primed by the end of the same work day, but in any event before any visible rusting occurs. Prime with UNITED'S **Lock-Down** or **Primer 302** applied at 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/l).

When used as a topcoat over aromatic polyurethane, polyurea or hybrid basecoats, the basecoat material must be clean and dry, and free of any dirt, dust, pollution, and other contaminants that may interfere with optimum adhesion. **ELASTUFF 200** should be applied within 48 hours of application of the basecoat to ensure maximum chemical bond. If the basecoated surface cannot be topcoated within 48 hours, the surface must be brush blasted, sanded, or abraded using other mechanical means and then solvent-wiped in order to provide an adequate mechanical bond.

ELASTUFF 200 adheres directly to most clean fiberglass and plastic surfaces. New or dense surfaces should be scuff-sanded prior to priming.

COATING APPLICATION

ELASTUFF 200 is applied using 1:1 ratio plural component airless spray equipment. Refer to separate literature entitled **Plural Component Spray Equipment** for information on design and operation.

ELASTUFF 200 shall be applied to concrete surfaces that have been previously primed with **Uni-Tile Sealer** or steel surfaces previously primed with **Primer 302** or **Lock-Down**. It can also be applied to fiberglass or wood surfaces previously primed with **Uni-Tile Sealer LV**, or to aromatic basecoats with no primer required. Do not apply **ELASTUFF 200** when the ambient temperature is below 40°F (4°C) or above 100°F (38°C).

In cooler ambient conditions where the material in the drum cannot be maintained at 60°F (16°C) or higher, it is recommended that drum heaters be utilized to facilitate easier pumping of the liquid components by the transfer pumps.

Coverage rates and dry mils are determined by specific project requirements. **ELASTUFF 200** applied at the rate of one (1) gallon per 100 sq. ft. (.4 l/m²) of the combined Part A and Part B will theoretically yield 16.0 dry mils (406 dry microns). The following dry mil thickness' are provided for guideline use only:

Light Abrasion – Dry or Immersion:

10 to 12 mils (254 to 305 microns)

Medium Abrasion – Dry or Immersion:

12 to 16 mils (305 to 381 microns)

Heavy Abrasion – Dry or Immersion:

16 to 20+ mils (381 to 508+ microns)

A minimum application thickness of approximately 10 wet mils (254 microns) is required in order for **ELASTUFF 200** to “wet out” and form a continuous, monolithic film. The number of coats required to achieve the specified thickness will vary depending on application method, jobsite and ambient conditions. Additional coats of **ELASTUFF 200** can be applied as long as the surface remains clean and there is still chemical cure occurring within the film, which is normally 3 to 5 days.

All surfaces must be uniformly coated and free of voids, pinholes or blisters. **ELASTUFF 200** is self-flashing at natural termination points such as expansion joints, corners, edges, counter-flashings, tank wall caps, etc. The finished coating membrane shall be allowed to cure a minimum of 24 hours at 75°F (24°C), (48 hours if ambient temperatures are below 60°F/15°C) before the area is returned to service.

LIMITATIONS & PRECAUTIONS

ELASTUFF 200 components are affected by moisture prior to catalyzation and must be protected from moisture contamination. After opening, purge containers with nitrogen or dry air and tightly seal. Although **ELASTUFF 200** is not affected by the presence of slight moisture during application, it is recommended that surfaces be dry for optimum results.

Use only in a well ventilated area. Avoid breathing vapor or spray mist. For exterior applications, approved MSHA/NIOSH chemical cartridge respirator must be worn by applicator and personnel in vicinity. It used indoors, air line masks or positive pressure masks must be worn. Avoid contact with eyes and skin. For additional information on safety requirements, refer to OSHA guidelines and **ELASTUFF 200** Material Safety Data Sheet.



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