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Elasta-Tuff™ 6000-AL-HS



UV/Color Stable Aliphatic Polyurethane Coating

A single component aliphatic polyurethane finish formulated for long-term durability, high tensile strength and protection from degradation caused by weathering and UV exposure.

Description

Elasta-Tuff™ 6000-AL-HS is a single-component, liquid-applied, moisture cured, elastomeric, abrasion resistant, aliphatic polyester-polyurethane finish/final coating. It is a flexible, UV stable top coating suitable for any surface that will accept paints and coatings. Its durability makes it useful for harsh environments such as high traffic areas, or boat decks and hulls that have to survive in a harsh marine environment. Its flexibility makes it especially useful for coating wood, which has a tendency to swell, shrink and move in changing environmental conditions.

Basic Uses

Elasta-Tuff™ 6000-AL-HS is intended as a primary coating for penetrating epoxy-treated wood, fiberglass, and concrete where the extra protection and durability of an extended-life polyurethane is required. **Elasta-Tuff™ 6000-AL-HS** is also recommended for protecting ELASTUFF 120 from degradation caused by normal weathering and ultraviolet exposure. As a top coating, **Elasta-Tuff™ 6000-AL-HS** provides a semi-gloss, wear resistant finish for boat and pedestrian decks, stairways, patios, balconies, and to protect any primed wood, concrete, and fiberglass. **Elasta-Tuff™ 6000-AL-HS** is slick when wet or icy. When used on exterior stairs, patios, decks and walkways, we recommend the use of a non-skid additive such as silica sand (supplied upon request), rubber or cork particulates, or non-skid strips applied to the surface.

Colors



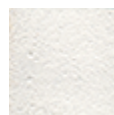
Pacific Gray



Monterey Sand



Ash Brown



White

NOTE: Colors shown are close approximations. Actual colors will vary slightly depending on the color accuracy of your monitor as well as other factors.

Properties

| | |
|---------------------------------|--|
| POLYMER COMPOSITION | ALIPHATIC, SATURATED POLYESTER URETHANE |
| Typical Properties/Wet | |
| Weight per gallon: | 9.7 ± 0.2 lbs. [ASTM D-1475] |
| Usable Pot Life: | 8 hours @ 70°F (21°C), 50% R.H. |
| Total Solids by Weight: | 78% (±2) [ASTM D-1353] |
| Total Solids by Volume: | 72.4% (±2) [ASTM D-2697] |
| Viscosity: | 25–35 poise @ 77°F (25°C) [Brookfield] |
| Dry Time To Walk On: | 24 hours @ 77°F (25°C), 50% R.H. @ 10 mils |
| Flash Point: | Above 116°F (46°C) [ASTM D-93] |
| Coverage Rates: | 80–100 sq ft/gallon (2–2.5 sq meters/liter) |
| Volatile Organic Compounds: | 2.08 lbs/gallon (250 gm/liter) [Calculated] |
| Specific Gravity | 1.5 |
| Typical Properties/Cured | |
| Tensile Strength: | 3300 ±300 psi (23 ±2 MPa) [ASTM D-412] |
| Elongation: | 200% (±50%) [ASTM D-412] |
| Tear Resistance Die C: | 250 ±50 pli (44 kN/m) [ASTM D-624] |
| Hardness: | 90 ±5 Shore A [ASTM D-2240] |
| Adhesion to Base Coat: | 30 pli |
| Water Vapor Permeability: | 0.1 perms [ASTM E-96] |
| Water Absorption: | <1.0% [ASTM D-543] |
| Abrasion resistance: | <.002" [C-502 Tabor Abrasion, 1000 rev, 1000 gm weight, CS-17 Wheel] |
| Chemical Resistance: | Excellent (Commonly encountered acids, salts, oils) [ASTM D-2299] |

| | |
|----------------------------|---|
| Weathering Resistance: | No Chalking @ 2000 hours [ASTM G-23] |
| Service Temperature Range: | -30° to + 180°F (-1° to + 82°C) |
| Thermal Shock: | No loss of adhesion [Alternate heat/cold cycle] |
| Dry Film Thickness: | 12 ±2 mils (300 ±50 microns) per coat |

Surface Preparation

Polyurethane basecoats which are to be topcoated with Elasta-Tuff™ 6000-AL-HS must be dry and clean, and free from any dirt, grease, oil, pollution fallout, or other foreign contaminants which could interfere with proper adhesion. For further information on basecoat application of Elastuff 120, see the tech sheet for that product.

Ideally, polyurethane basecoats should receive Elasta-Tuff™ 6000-AL-HS as soon as the basecoat surface has cured sufficiently to walk on. In any event it should be topcoated before achieving total cure, which can vary from 2 to 7 days depending upon basecoat used and weather conditions at time of application.

When Elasta-Tuff™ 6000-AL-HS is applied directly to wood, fiberglass, or concrete substrates, the following surface preparation procedures should be followed:



Wood Surfaces: Wood should be dry and clean, and free from any dirt, grease, oil, pollution fallout, or other foreign contaminants which could interfere with proper adhesion. Clean surfaces shall be primed with **S-1™ Clear Penetrating Epoxy Sealer** at the rate of 300 sq. ft. per gallon (7 sq. meters/liter). However, the amount of **S-1™** required will vary, depending on the absorbency of the wood.

Old wood or restored wood should be clean and bare and free of any foreign contaminants. We strongly recommend a prime coating of **S-1™ Clear Penetrating Epoxy Sealer** if the wood shows any signs of deterioration, softness or rot. After the sealer has completely dried/cured, existing hairline cracks should be filled with **SculpWood® Epoxy Paste or Putty** or a polyurethane sealant, such as our **Dymonic® 100**. Any of these fillers should be troweled flush with sufficient pressure to fill the cracks and joints completely. At least 2 generous coatings of **Elasta-Tuff™ 6000-AL-HS** are required on top of the primed surface. Each additional coat should be applied perpendicular to the original coating.

For plywood it is beneficial if all side and end grain surfaces are completely sealed from any moisture penetration before the application of the **Elasta-Tuff™ 6000-AL-HS**. This can be done with 3 coats of **S-1™ Clear Penetrating Epoxy Sealer**. Or with a coat of **S-1™ Clear Penetrating Epoxy Sealer** and one coat of an epoxy resin such as our **General Purpose Epoxy™ Resin**. Or with a coat of **S-1™ Clear Penetrating Epoxy Sealer** and two coats of our **Elastuff 120**.

On large new plywood decks or platforms, all the joints must be backed and left with a 1/8" (3 mm) gap between sheets. A polyurethane sealant should be applied and troweled flush into the opening. After curing, the seams should have polyester reinforcing fabric embedded into a strip coat of **Elasta-Tuff™ 6000-AL-HS**.



Fiberglass Surfaces: Fiberglass shall be dry and clean, and free from any dirt, grease, oil, pollution fallout, or other foreign contaminants which could interfere with proper adhesion. All fiberglass surfaces should then be scuff sanded and wiped down with MEK or vacuumed to remove all dust.

Elasta-Tuff™ 6000-AL-HS achieves an excellent bond to fiberglass surfaces prepared in this manner with no primer required. If fiberglass is chalky or oxidized, apply a prime-coat of **S-1™** Clear Penetrating Epoxy Sealer at the rate of 350 sq. ft. per gallon (8.5 sq. meters/liter).



Concrete Surfaces: Concrete should be dry and clean, free from any dirt, grease, oil, pollution fallout, smoke, wax, form release agents, surface chemicals, or other foreign contaminants which could interfere with proper adhesion. Surfaces should be free of sharp projections, ridges and loose aggregate.

Sandblasting of concrete will be required if the surfaces are contaminated to the point that acid, chemical cleaning or power washing is not sufficient for removal. Concrete surfaces having a smooth, steel troweled finish must be acid etched or sandblasted.

Prior to sealer application, all loose material, foreign objects, dirt and dust shall be removed by use of a power vacuum. Immediately after vacuuming is completed, concrete surfaces should be sealed with one (1) coat of **S-1™** Clear Penetrating Epoxy Sealer. Sealer shall be applied by roller or airless spray at the rate of 250 sq. ft. per gallon (6 sq. meters/liter).

After sealer has completely dried, all cracks, control joints, cold joints and voids shall be filled with a polyurethane sealant, such as our **Dymonic® 100**. Cracks larger than hairline should be reinforced with polyester reinforcing fabric, embedded into a strip coat of **Elasta-Tuff™ 6000-AL-HS**. At the intersection of concrete walls and slabs, apply sealant in the same manner, extending a minimum of 1 ½" (38 mm) vertically and horizontally. **Elasta-Tuff™ 6000-AL-HS** is not designed to bridge cracks greater than 1/32" (0.79 mm) in width. The **Dymonic® 100** or other polyurethane sealant shall be allowed to cure a minimum of 24 hours prior to the application of **Elasta-Tuff™ 6000-AL-HS**.

Packing and Mixing

Elasta-Tuff™ 6000-AL-HS is available in 1 gallon (3.78 l) cans. Since **Elasta-Tuff™ 6000-AL-HS** is a moisture cured product, once the cans have been opened they must be used within one or two days. Before applying, mix product briefly with a power mixer, or for five minutes if mixing by hand. Try not to mix in any more air bubbles than necessary. When applying at lower temperatures, add **Elasta-Tuff™ Accelerator** after initial stirring for faster cure time. **Elasta-Tuff™ Accelerator** is available in 3oz (89 ml) cans.

Coating Application

Elasta-Tuff™ 6000-AL-HS can be applied by brush, roller or squeegee. If using a roller for application, we recommend using a phenolic core roller.

The second coat may be applied as soon as the first application is dry enough to accept the roller/brush or as soon as the surface can be walked on. If the first coating remains uncoated for longer than two weeks, it is recommended that the surface be wiped down with xylene before the second coating is applied.

Cure Time: In mild conditions (70°F/21°C, 50% Relative Humidity), cure time for light foot traffic is 24 hours. Cure time for heavy traffic is 72 hours. Cure time is dependent on humidity and temperature. Lower temperatures and lower humidity will lengthen cure time. For application in lower temperatures **Elasta-Tuff™ Accelerator** is recommended. Do **not** use **Elasta-Tuff™ Accelerator** in temperatures above 85°F (29°C).

Elasta-Tuff™ Accelerator: 3 ounces (89 ml) of **Elasta-Tuff™ Accelerator:** should be added at 55°F (13°C). 6 ounces (178 ml) of **Elasta-Tuff™ Accelerator:** should be added at 45°F (7°C). **Elasta-Tuff™ Accelerator:** can be added in mild temperatures up to 85°F (29°C) if a quicker cure is desired.

Elasta-Tuff™ 6000-AL-HS should be applied at the coverage rate of 80–100 sq. ft./gallon

(2–2.5 sq. meters/liter) which will theoretically yield 16–20 wet mils 12 ±2 dry mils. Actual gallon required on the job to achieve the minimum dry mil film thickness will depend upon the surface texture, technique of the applicator, and weather conditions at the time of application. It is the responsibility of the applicator to apply sufficient material to achieve the required dry mil film build.

Applications utilizing **Elasta-Tuff™ 6000-AL-HS** topcoat will normally require a minimum of two coats. All surfaces must be uniformly coated and free from voids, pinholes and blisters. Re-coat time is 24 hours in average temperatures.

Non-skid aggregate (spherical sand or pumice, rubber or cork particulates), if desired, should be broadcast into the second from last coat of **Elasta-Tuff™ 6000-AL-HS**, or blended into the final coat mix and roller applied to achieve a uniform fine texture finish. We supply silica sand in with your order upon request.

Elasta-Tuff™ 6000-AL-HS should not be applied when the ambient temperature is below 45°F (7°C), or if rain is anticipated within 24 hours of application. Minimum storage temperature of 40°F (4.5°C) is recommended. Store **Elasta-Tuff™ 6000-AL-HS** in a warm area prior to application for sufficient length of time to bring material temperature to 75°F (24°C).

If thinning is required for application, use xylene solvent sparingly, not more than 5% per volume. Clean equipment with MEK or methylene chloride.

Cleanup, Shelf Life and Storage

Use M.E.K. or Methylene Chloride for cleanup. Shelf life in unopened containers is 12 months from date of manufacture. Material must be stored at temperatures between 40°F and 80°F (4.5°C and 27°C). Do not open the containers until ready to use the material.

Elasta-Tuff™ 6000-AL-HS components are affected by moisture prior to catalyzation and must be protected from moisture contamination. Keep all containers tightly closed during storage. Containers are factory sealed to prevent contamination. After opening and if all components are not to be used, containers must be tightly sealed. Shelf life of an opened container is very limited.

Precautions

Solvents in **Elasta-Tuff™ 6000-AL-HS** are flammable. Use only in a well ventilated area. Keep away from heat, sparks, open flame or lighted cigarettes. This includes electric motors such as power drills, washing machines, and fans, and pilot lights on gas fired furnaces. Avoid breathing the vapor or spray mist. For exterior applications, approved (MSHA/NIOSH) chemical cartridge respirators should be worn. If used indoors, provide mechanical exhaust ventilation. Avoid contact with eyes and contact with skin.

WARNING: **Elasta-Tuff™ 6000-AL-HS** contains flammable solvents and isocyanate. The vapor can be harmful if breathed in concentrated amounts over a period of time. We recommend the use of an organic fumes rated respirator, such as our **Moldex respirators**. Because of the isocyanate catalyst, NIOSH recommends the use of a N95 or better particulate pre-filter. Our prefilter are N95 rated.

AVOID CONTACT WITH EYES AND SKIN.

For additional information refer to the **Elasta-Tuff™ [Safety Data Sheet](#)**.

Elasta-Tuff™ 6000-AL-HS and the Accelerator are hazardous products. Check the [shipping options](#) page for details on shipping hazardous items.



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Order by phone, fax, mail, or e-mail.



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All products ship within 2 business days from both coasts!

Our business hours are 6:30 AM to 5:30 PM Pacific Time, Monday–Friday.

Tech support is available over weekends and holidays.
