

# ELASTUFF 120 MASTIC

100% SOLIDS POLYURETHANE MASTIC  
Classified by Underwriters Laboratories Inc.  
in Accordance with ANSI/NSF Standard 61

## Technical Data & Application Instructions

### PRODUCT DESCRIPTION

ELASTUFF 120 MASTIC is a two-component, 100% solids polyurethane elastomer in a high-build, mastic consistency. This system provides a limited workable pot life, and therefore does not require specialized application equipment. ELASTUFF 120 MASTIC can be applied by trowel or can be thinned slightly to create a brush/roller-grade version for use on vertical and horizontal applications requiring either heavy or light film builds. ELASTUFF 120 MASTIC is a highly crosslinked polymer coating, which yields a dense, slick finish. The non-porous nature and excellent hydrolytic stability, coupled with resistance to cathodic disbondment, make ELASTUFF 120 MASTIC an excellent barrier to moisture and corrosion.

Designed to protect surfaces subjected to abrasion in aqueous solutions or environments, ELASTUFF 120 MASTIC can be used in potable water systems, salt water, various slurry systems, and numerous acid and base solutions.

The high tensile strength of ELASTUFF 120 MASTIC contributes to its resistance to abrasion and tearing. This toughness, combined with its high elongation properties, results in outstanding flexibility and impact resistance.

### BASIC USES

ELASTUFF 120 MASTIC is used as a sealant, caulk, filler, bonding agent and finish where hydrophobic, abrasion and chemical resistance properties are required. It is used over sealed concrete and primed metal surfaces, and also has excellent adhesion to high density polyethylene (HDPE) products when applied in conjunction with a heat treated surface. Typical applications utilizing ELASTUFF 120 MASTIC include interior tank lining, waste/water containment, manhole repairs, flumes, reservoirs, valves, interior pipe, and other areas subjected to aqueous environments.

ELASTUFF 120 MASTIC is a non-toxic lining and can also be used in applications associated with potable water containment. It has been tested and classified by UL in accordance with ANSI/NSF 61, Section 5, Barrier Materials. Any primers or topcoats use in potable water applications should also be certified.

### TYPICAL PROPERTIES

- Mixing Ratio:**  
1 part A to 1 Part B by volume (1A:1B)
- Flash Point:**  
Part A > 200°F (93°C)  
Part B > 200°F (93°C)
- Dry Time to Touch:**  
4 hours tack free @ 75°F (24°C), 50% R.H.
- Cure Time:**  
90% after 24 hours @ 75°F (24°C), 50% R.H.
- Mixed Usable Pot Life:**  
20 minutes @ 75°F (24°C), 50% R.H.
- Water Absorption:**  
Less than 1% weight gain after 7 days  
[ASTM D570]
- Tensile Strength:**  
1,300 psi (±100) (9.0 MPa) [ASTM D412]
- Elongation:**  
150% (±20) [ASTM D412]
- Tear Strength:**  
200 lb/in. (±30) (35 kN/m) [ASTM D1004]
- Hardness:**  
30 to 40 Shore D @ 75°F (24°C)  
40 to 50 Shore D @ 35°F (2°C)  
[ASTM D2240]
- Abrasion Resistance:**  
20 to 30 mg weight loss with CS-17 wheel;  
50 to 70 mg weights loss with H-10 wheel  
using 1000 gm weight at 1000 revolutions  
[ASTM D4060]
- Low Temperature Flexibility:**  
Passes ¼" (6 mm) mandrel bend @ -4°F (-20°C)
- Low Temperature Impact Resistance:**  
Passes 160 inch pound (18.1 Joules) direct @  
-4°F (-20°C)

### COLORS

Standard color for ELASTUFF 120 MASTIC is Gray. For custom colors, consult UNITED'S Technical Service Department.

*Meets All /Federal, State and  
Local V.O.C. Requirements*

## **SURFACE PREPARATION**

### **STEEL SURFACES:**

Steel must be dry and clean, free of excessive rust scale, pollution fallout, dirt, grease, surface chemicals or other foreign contaminants prior to blast cleaning. A careful examination must be made to ensure that these contaminants, along with any accumulated oil, smoke, wax, or any other material that could interfere with adhesion, have been removed. This should be accomplished by use of a solvent wash as defined in SSPC-SP1 Solvent Cleaning. Excessive rust scale shall be removed by mechanical means prior to blast cleaning.

Steel surfaces must be cleaned to Near-White (SSPC-SP10) with a minimum anchor pattern of 2.0 mils (51 microns).

Abrasive blast cleaning shall not be performed when surface temperature of the steel is less than 5°F (3°C) above the dew point of the ambient air, or when there is a possibility that the blasted surface will become wet before the primer can be applied.

The blast cleaned surface shall be primed by the end of the same work day, but in any event before any visible rusting occurs. If rusting occurs after blast cleaning, the surfaces shall be reblasted before priming.

Steel surfaces shall be primed with United's **Primer 302** or **Lock-Down Primer** to a thickness of 1.0 to 2.0 dry mils (25 to 51 microns), depending upon surface profile. For details of application, refer to separate literature entitled **Primer 302** or **Lock-Down Primer** Technical Data and Application Instructions.

### **CONCRETE SURFACES:**

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

New concrete shall be cleaned and etched with 10% Muriatic Acid Solution. Surfaces shall then be rinsed with liberal amounts of fresh water to assure complete acid removal.

Concrete surfaces contaminated with oil, grease, dirt, etc. shall be cleaned prior to acid etching with **United Cleaning Concentrate (UCC)** and water. High pressure power washing may be necessary to remove strongly adhering contaminants.

Sandblasting of concrete will be required if the surfaces have been previously coated or if surfaces are contaminated to the point that acid, chemical cleaning or power washing is not sufficient for removal. Sandblasting must produce an even profile with a minimum surface height of 5 to 8 mils (127 to 203 microns).

Prior to sealer application, all loose material, foreign objects, dirt and dust shall be removed by use of a power vacuum. Concrete surfaces shall be completely dry.

Immediately after vacuuming, concrete surfaces shall be sealed with one (1) coat of United's **Uni-Tile Sealer LV**. Sealer shall be applied at the rate of 400 to 500 sq. ft. per gallon (0.7 to 12.2 m<sup>2</sup>/l). For details of application, refer to literature entitled **Uni-Tile Sealer LV** Technical Data and Application Instructions.

### **HIGH DENSITY POLYETHYLENE (HDPE)**

#### **SURFACES:**

HDPE surfaces to be coated with **ELASTUFF 120 MASTIC** require application of heat by means of an acetylene or propane torch to achieve flame ionization. Torch should be held to the HDPE surface until it is heated to just below the melting point. For approximately 2 minutes, the heat treated area will be acceptable for bonding **ELASTUFF 120 MASTIC**.

### **PACKAGING**

**ELASTUFF 120 MASTIC** is a two component, 1:1 ratio material available in 1-gallon cans and 5-gallon pails.

Part A component contains the isocyanate. Part B component contains the curative solution.

### **MIXING**

Part A and Part B components should be thoroughly and continuously blended for a period of 2 to 5 minutes until a completely uniform Gray color is achieved.

### **APPLICATION**

**ELASTUFF 120 MASTIC** can be applied using a trowel, putty knife, brush or bulk caulking equipment. Coverage rates and dry film thickness are determined by specific project requirements. The versatility of **ELASTUFF 120 MASTIC** allows the specifying engineer to solve a multitude of protection problems using one product system at a wide range of dry film thicknesses. Contact UNITED'S Technical Service Department for specific recommendations.

**ELASTUFF 120 MASTIC** applied at the coverage rate of one gallon per 100 sq. ft. (.4 l/m<sup>2</sup>) of the combined Part A and Part B will theoretically yield 16.0 dry mils (406 dry microns). Film thicknesses is virtually unlimited. Care should be taken to avoid air entrapment within the material during application.

### **PRECAUTIONS**

For exterior applications, approved (MSHA/NIOSH) certified supplied air respirator must be worn by applicator personnel. If use indoors, provide mechanical exhaust ventilation in addition to respirator use. This material is a skin, eye and respiratory sensitizer and irritation. Review material Safety Data Sheet (MSDS) for this material before use.

