TECHNICAL INFO

AEROVENT
INDUSTRIAL VENTILATION SYSTEMS

Liquid Coatings Sheet TILC/A-1.0222

Epoxy Mastic

General Description

Epoxy Mastic is a satin gloss, high build epoxy mastic, two-package, VOC conforming product (2.1 lbs./gal.) based on amido amine modified polyamide epoxy technology. The resulting coating is designed to be highly durable and deliver outstanding corrosion and chemical resistance.

Typical Uses

As a high performance direct-to-metal (DTM) coating or topcoat on carbon steel, galvanized steel, stainless steel, aluminum, concrete, concrete block and wood with:

- Excellent resistance to chemical and/or marine environments is required.
- Outstanding abrasion resistance and edge protection are required.
- Caustic environments common in scrubber applications.

Epoxy Mastic is primarily designed for corrosion protection. Epoxy Mastic will chalk upon exposure to sunlight. If gloss, color retention and color stability are important, Epoxy Mastic can be topcoated with Polyurethane Acrylic. In high temperature applications, some yellowing may occur.

Compatibility with Other Coatings

Epoxy Mastic is highly compatible with most coating types. It may be used over most aged and hard cured coatings in good condition. Testing for lifting, bubbling and adhesion is recommended to assure compatibility with unknown coatings. Contact Aerovent for specific recommendations.

Not Recommended For

- Immersion service in potable water, chemicals or hydrocarbons
- Extreme UV exposure without topcoat

Recommendations for Immersion Service

Epoxy Mastic when applied in multiple coats (at least 2) at 10-12 mil DFT is recommended for immersion service in near neutral, fresh or saltwater exposures. It is not recommended for use with potable water. It may be used for fire, wastewater treatment plants, offshore structures and other areas where a high level of water resistance is required.

Performance Properties

Abrasion & Mechanical	Excellent
Alkalis	Excellent
Humidity	Excellent
Solvents	Excellent
Acids	Very Good
Salts	Excellent
Weather	Very Good (will chalk on exterior exposure)
Ammonia	Excellent

Color
Various. Select Factory Packaged colors and custom mixes available.

LF-63225P White	LF-64025P Black	LF-63325P Shale Gray
LF-63525 Clay Tan	LF-63725P Cirrus Gray	

Application

Surface Preparation

For atmospheric service, an SSPC-SP 6 Commercial Blast Cleaning is preferred for optimal performance. If not possible or practical, then Hand Tool Clean to an SSPC-SP 2 or Power Tool Clean to an SSPC-SP 3. For immersion service, an SSPC-SP 5 White Metal Blast is required.

Spray Application

Re-Coat

Recoating of Epoxy Mastic should be done as soon as possible after dry to touch, a minimum of 3-5 hours at 70°F, up to overnight. If you cannot recoat within 7 days up to 30 days, and you have not exposed the Epoxy Mastic to strong exterior sunlight and elevated temperatures over 100°F, you should water wash with a minimum of 1500 psi to remove any surface contamination. If you cannot recoat before 30 days and have exposed the Epoxy Mastic surfaces to exterior sunlight and elevated temperatures over 100°F, you should either:

Option 1: Water wash the surface with 1500 psi and apply 1-2 mils DFT tack-mist coat Epoxy Mastic over the existing Epoxy Mastic painted surface and topcoat within 3-5 hours up to overnight, or

Option 2: Water wash the surface with 1500 psi and abrasively brush-blast to an SSPC-SP7 (sweep-blast) and topcoat within 3-5 hours up to overnight.

Physical Properties of the Coating

Maximum Service Temperature:	Up to: 250°F Continuous 300°F Intermittent 100°F Immersion
Volume Solids:	72% ± 2%
Weight Solids:	83% ± 2%
Suggested Film Thickness:	
Single Coat	5-8 mils - noncorrosive environment 10-12 mils - corrosive environment
Primer	3 - 8 mils
Mid Coat	4 - 6 mils
Immersion	10 - 12 mils
Gloss:	Satin Finish

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Typical Properties of the Coating

Physical properties are averages. Properties for Epoxy Mastic are enhanced when used in conjunction with topcoats such as Polyurethane Acrylic or applied at higher film builds. The results listed below are obtained when applying Epoxy Mastic (gray) to 5.1 mils DFT. For other system results, contact Aerovent.

Paint System: Epoxy Mastic
Type/Color: Epoxy/Gray
DFT: 5.1 mils

Salt Fog (ASTM B117)	1000 hours	no rusting, no blisters
	2000 hours	no rusting, few #2 blisters at the scribe
	3000 hours	no rusting, no undercutting at the scribe, medium #2 blisters at the scribe
Relative Humidity (ASTM D2247)	1000 hours	no rusting, no blisters
	2000 hours	no rusting, no blisters
	3000 hours	no rusting, no blisters
Dry Heat (ASTM D2485)	250°F for 24 hours	no cracking, very slight loss of adhesion, slight discoloration
Electrical Resistance (ASTM D2457)		28.3×10^{17}
Adhesion (ASTM D4521 A2)	1834 psi	adhesion failure between coating and substrate
Cleveland Cond (ASTM D4585)	1000 hours	no rusting, no blisters, no delamination
UV Con (ASTM D4587)*	3000 hours	Gloss before exposure: 48.9 Gloss after exposure: 1.5
	Evaluation	no rusting, no blisters, no delamination
Impact (ASTM D2794)		3 inch pounds
Mandrel Bend (ASTM D522)		% Elongation - 0%
Taber Abrasion (ASTM D4060)		weight loss in grams - .07

*8 hour UV @ 122°F (50°C), 4 hour condensation @ 104°F (40°C), gloss readings @ 60°

Safety and Handling

Ready to use paint materials containing isocyanates can cause irritation of the respiratory organs and hypersensitive reactions. Asthma sufferers, those with allergies and anyone with a history of respiratory complaints must not be asked to work with products containing isocyanates.

Do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation and gloves.

All technical advice, recommendations and services are rendered by the Seller gratis. They are based on technical data that the Seller believes to be reliable and are intended for professional use by persons having skill and know-how at their own discretion and risk. Seller assumes no responsibility for results obtained or damages incurred from their use by Buyer in whole or in part. Such recommendations, technical advice or services are not to be taken as a license to operate under or intended to suggest infringement of any existing patent.

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