Starting Formulation

SF 1036

Coating for Application to Wet Surfaces (Fresh & Salt Water)
EPON™ Resin 828 / EPIKURE™ Curing Agent 3125

Suggested Uses

- Recommended to arrest corrosion in splash-zone areas of bulkheads, pilings, bridge abutments, drilling rigs and other marine structures

Features

- Adheres to wet surfaces
- Cures while immersed in fresh or salt water; resists wave action during cure
- cycle
- Contains no Volatile Organic Compounds (VOC)

Formula	Material	Supplier	Pounds	Gallons
	Part A			
		Pre-mix the following		
	Weston EGTPP	Westlake Epoxy Performance Products	49.7	5.1
	Magnesium Oxide	Harcros Chemicals, Inc.	trace	trace
		Add the following with mixing		
	EPON Resin 828	Westlake Epoxy	546.3	56.3
		Slowly add the following		
	971 Magnesium Silicate	Whittaker, Clarke & Daniels	76.0	3.3
	Silica 219	Whittaker, Clarke & Daniels	645.3	29.2
	Medium Chrome Yellow 969LD	Cooksen Pigments	46.3	1.0
	Sodium Pyrophosphate, anhydrous	Cytec Industries	114.0	5.1
		Total Part A	1,477.7	100.0
	Part B			
	EPIKURE Curing Agent 3125	Westlake Epoxy	537.0	66.2
	Silica 219		568.0	25.8
	971 Magnesium Silicate		179.7	7.8
	Superjet Carbon Black LB-1011	Harcros Pigments, Inc.	3.3	0.2
		Total Part B	1,288.0	100.0

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Total Part A & B	2,765.7	200.0

Mixing Instructions

	Pounds	Gallons
Part A	1,477.7	100.0
Part B	1,288.0	100.0
Part A + B	2,765.7	200.0

To manufacture the EPON Resin component, first stabilize the Weston EGTPP by adding 1% weight magnesium oxide. Then, charge the EPON Resin 828 and the stabilized Weston EGTPP to a pony mixer and add the pigments slowly with constant agitation until a smooth paste is obtained.

To manufacture the curing agent component, charge the EPIKURE Curing Agent 3125 to a pony mixer and add the pigments slowly with constant agitation until a smooth paste is obtained. The epoxy resin component and the curing agent component should be packaged separately until they are ready to be used.

Typical Handling Properties

NOTE: For optimum performance, this formulation is combined in a ratio of 1.0 part by volume of the EPON Resin component to 1.20 parts by volume of the polyamide resin component. This also translates to 1.0 part by weight of the EPON Resin component to 1.04 parts by weight of the polyamide resin component.

Combine the curing agent component and the EPON Resin component in the ratio highlighted above. Mix until a uniform olive color is obtained. Because of the high viscosity of the components, a power-driven stirrer greatly facilitates the mixing operation. As noted in the Formulation Constants section, the combined system will provide a pot life of about 1.5 to 2.0 hours. Do not mix any more material than can be applied during that time frame.

This formulation, with a weight ratio of polyamide resin to epoxy resin of 1.18/1, is believed to be optimum for this type of application. The use of higher concentrations of polyamide resin curing agent will provide an increase in flexibility, but with a decrease in hardness of the coating. If the ratio of polyamide resin to epoxy resin exceeds 1.5/1, poor adhesion may result under immersion conditions. Handling properties may be altered to suit individual preferences by varying the type and/or amount of extender pigments.

The surface to be coated should be cleaned thoroughly. Where the purpose of the coating is to arrest corrosion in the splash-zone areas of marine structures, the surface should be cleaned over an area extending from the top of the splash-zone to a depth of one or two feet below the low-tide water level. Sandblasting is the recommended method of preparing the surface since it has been found that a clean (except for water) and structurally sound surface is required to obtain good adhesion. No difficulty has been encountered in sandblasting under water – the initial blast of air clears a path for the sand/air mixture.

The coating material may be applied by hand. This is most easily accomplished by wearing a skin diver's wet suit, rubber gloves and a life jacket with a life line secured to the structure. An outfit of this type provides warmth, buoyancy, protection against cuts and scratches from barnacles, and overall safety. Best results are obtained if a heavy layer of the coating material is applied above the water line and held in place until it grips the underlying surface. The material should then be smeared uniformly up and down over the area to be protected – all edges should be feathered. To assure adequate coverage, the applicator should aim for a film thickness of approximately 1/8 to 1/4 inch. The coating is easily molded to this thickness if the rubber gloves are kept wet during the application procedure.

Although this formulation is designed specifically for use in fresh water, it may be used in salt water as well.

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Typical Formulation Properties

Table 1 / Formulation Properties

	Units	Value
Mix Ratio (Part A : Part B)	Volume	1 : 1
	Weight	1.15 : 1.0
Nonvolatile content by weight	%	100.0
Weight per gallon	lb/gal	13.7
Pigment : Binder Weight Ratio		1.44/1
Volatile Organic Compound (VOC)	lb/gal	0.0
	g/L	0.0
Pot life	hrs	1.5-2.0

Storage

Recommendations regarding storage conditions can be obtained by visiting our web site at www.westlakeepoxy.com

General Information

These are starting formulations and are not proven in the user's particular application but are simply meant to demonstrate the efficacy of the products and to assist in the development of the user's own formulation. It is the user's responsibility to fully-test and qualify the formulation, along with the ingredients, methods, applications or equipment identified herein ("Information"), by the user's knowledgeable formulator or scientist, and to determine the appropriate use conditions and legal restrictions, prior to use of any Information.

Safety, Storage & Handling

Please refer to the MSDS for the most current Safety and Handling information.

Exposure to these materials should be minimized and avoided, if feasible, through the observance of proper precautions, use of appropriate engineering controls and proper personal protective clothing and equipment, and adherence to proper handling procedures. None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Material Safety Data Sheet (MSDS) for these and all other products being used are understood by all persons who will work with them. Questions and requests for information on Westlake Epoxy, Inc. ("Westlake Epoxy") products should be directed to yourWestlake Epoxy sales representative, or the nearest Westlake Epoxy sales office. Information andMSDSs on non-Westlake Epoxy products should be obtained from the respective manufacturer.

Contact Information

For product prices, availability, or order placement, please contact customer service:

www.westlakeepoxy.com/Contacts/

For literature and technical assistance, visit our website atwww.westlakeepoxy.com

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