Starting Formulation

SF 4006 Water-Reducible Bond Coat WD-510 3072 Water-Reducible Epoxy Bond Coat for New Concrete

EPI-REZ™ Resin WD-510 / EPIKURE™ Curing Agent 3072

Introduction This epoxy formulation is readily mixed and thinned with water at the job site to form a stable emulsion. This formulation combines the application and clean-up features of water based systems with the bond strength and water resistance of conventional epoxy adhesives. Applied to old substrates which are to be topped or integrally joined to freshly placed Portland Cement concrete, this bond coat develops adhesion exceeding the tensile strength of concrete and also serves to prevent rapid loss of water from the freshly placed concrete at the interface.

Formula	Material	Supplier	Pounds	Gallons
	Part A			
	EPI-REZ Resin WD-510	Hexion	100.0	10.41
	Cab-O-Sil TS-720	Cabot Corp..	1.0	0.07
		Part A	101.0	10.48
	Part B			
	EPIKURE 3072 Curing Agent	Hexion	35.0	4.27
		Part B	35.0	4.27
	Part C			
	Tap Water		53.0	6.36
		Part C	53.0	6.36
		Total Part A & B & C	189.0	21.11

Mixing Instructions Resin Portion

Disperse the Cab-O-Sil TS-720 into the epoxy resin using high shear agitation. The purpose of the thixotrope is to provide a continuous adhesive film that is free from craters and crawling.

For vertical applications, the amount of Cab-O-Sil TS-720 may be increased to 3 phr in order to restrict drainage and retain a 4- to 10-mil adhesive film.

Immediately prior to use, blend the resin and converter portions. When a uniform blend is obtained, add the designated amount of water and stir until a creamy emulsion is formed. Mechanical agitation, such as that provided by a portable electric drill motor powering a propeller-shaped agitator is preferred for thorough mixing. If manual stirring is

propeller-shaped agitator is preferred for thorough mixing. If manual stirring is necessary, scrape the sides and bottom of the container frequently to insure thorough blending.

Typical Handling Properties

Table 1 / Handling Properties

	Units	Value
Viscosity at 25 °C		
5 rpm	cP	48
10 rpm	cP	31
20 rpm	cP	18
Non-Volatile Content		
by weight	%	72
Pounds/gallon	lbs/gal	8.96
Gel Time, 100 grams		
at 13 °C	hrs	6
at 25 °C	hrs	5
at 38 °C	hrs	3

Application Instructions

The substrate should be free from contaminants such as cement laitance, oils, waxes, greases, and curing compounds. While old concrete does not need to be thoroughly dry, any standing water must be removed before the emulsion bond coat is applied.

The emulsified system should be brushed, sprayed, or rolled onto the substrate. Apply an average wet film thickness of 4 to 10 mils. One gallon covers from 400 to 160 square feet. Substrate temperatures above 13 °C, or above 4.4 °C and rising, are necessary for the epoxy adhesive to cure at a practical rate. The fresh concrete can be placed immediately after the bond coat is applied at any time prior to gelation of the bond coat.

Typical Adhesive Properties

Table 2 / Adhesive Properties

Curing Conditions	Bond Strength	Location of Failure
1 month at 25 °C and 95% R.H.	>210 psi	100% in new concrete
1 month at 25 °C and 95% R. H. plus 2 weeks partial water immersion	>210 psi	100% in new concrete

Storage

Recommendations regarding storage conditions can be obtained by visiting our web site at www.hexion.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 Hexion Inc. ("Hexion") products should be directed to your Hexion sales representative, or the nearest Hexion sales office. Information and MSDSs on non-Hexion products should be obtained from the respective manufacturer.

Contact Information

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

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