

Starting Formulation

SF 6011

Gray, High Build Epoxy Floor Coating Epoxy EPON™ Resin 828 and 8021 / EPIKURE™ Curing Agent 3370

Introduction This low viscosity epoxy system is designed for a convenient volumetric combining ratio, easy application, and the development of cured coatings possessing hard glossy surfaces free of blush, exudation or residual tackiness. The epoxy binder system has been selected for the development of a tough, abrasion resistant floor coating which should offer suitable resistance to industrial usage and moderate chemical exposure.

Formula	<u>Material</u>	<u>Supplier</u>	<u>Pounds</u>	<u>Gallons</u>
Resin Portion				
	EPON Resin 828	Hexion	50.000	5.180
	EPON Resin 8021	Hexion	50.000	5.430
	Ti-Pure R-960	Du Pont Co.	5.000	0.150
	Fiberfrax EF-119 Milled Fiber	Carborundum Co.	15.000	0.650
	Cab-O-Sil TS-720	Cabot Corp..	1.000	0.060
	Black Iron Oxide	Akrochem Corp.	<u>0.005</u>	<u>0.001</u>
	Total Resin Portion		121.005	11.471
Converter Portion				
	EPIKURE Curing Agent 3370	Hexion	<u>43.0</u>	<u>5.16</u>
	Total Converter Portion		43.0	5.16

Compounding and Application Instructions Disperse the Cab-O-Sil TS-720, Ti-Pure R-960, Fiberfrax EF-119 and Black Iron Oxide pigments into the EPON Resin 828 by means of a suitable high sheer mixer. When a uniform dispersion has been formed, cool to a temperature of 120 °F or below and add the EPON Resin 8021. Mix to a homogeneous consistency.

No induction time is required with this formulation. Combine the resin and converter portions in the indicated ratios immediately prior to application. Mix until uniformly blended and apply to the substrate. The surface to be coated must be free of dust, dirt, grease or weakened concrete laitance. A uniform coating can be applied with a brush, paint roller or squeegee. Coverage rates depend on the application technique, substrate porosity and intended function, but for most applications an average thickness of 5 to 15 mils (320 to 110 square feet/gallon) is typical. Film weights at the low end of the range are for sealer applications and higher film weights are for finish coat applications. Cure 12 to 16 hours at normal room temperature before opening to light traffic; a 2 to 3 day cure period should precede exposure to heavy traffic, standing water or mildly corrosive chemicals. Continuous exposure to organic solvents should be avoided.

Typical Handling Table 1 / Handling Properties Properties

	<u>Units</u>	<u>Value</u>
Generated:		October 19, 2021
Issue Date:		
Revision:		

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Resin/Converter Combining Ratio	by weight	121 : 43
	by volume	2.22 : 1
Blend Properties at 23 °C		
Viscosity, Initial	cP	750
Expected pot life, 100 gram mass	min.	16

Typical Cured State Properties Table 2 / Cured State Properties of Filled System¹

	<u>Units</u>	<u>Value</u>
Tensile Strength	psi	6995
Tensile Modulus 10 ⁶	psi	0.45
Tensile Elongation	%	6.0
Izod Impact, notch	ft.·lb./inch	0.48
Hardness	Shore D	86
Heat Deflection Temperature	°C	57
Tabor Abrasion, wear index ²	mg. loss/1000 cycles	24.8

¹ Determined after 14 days at 23 °C cure schedule.

² System applied 10 mils to Bonderite 1000 substrate, reported at mg. loss/1000 cycles using CS-10 wheels.

Typical Cured State Properties Table 3 / Chemical Resistance of Filled System¹

Immersion	<u>Units</u>	<u>Water</u>	<u>5% Acetic Acid</u>	<u>Xylene</u>
1 day	%	0.21	0.29	0.92
2 weeks	%	0.73	0.95	4.53
4 weeks	%	1.01	1.34	6.66

¹ Percent weight gain of 3 inches x 1 inch x 1/8 inch specimens immersed at 23 °C.

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.

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