

Starting Formulation

SF 5003

Chemical Resistant Epoxy Glaze or Tank Lining EPON™ Resin 813 / EPIKURE™ Curing Agent 3370 and 3271

Introduction This epoxy formulation is designed for industrial flooring, sealer coatings and tank linings that require resistance to a broad spectrum of chemicals, such as alkalis, dilute acids, aliphatic hydrocarbon solvents, salt solutions, sugar solutions, greases, animal fats, oils and acidic foods processed from milk, citrus fruits, tomatoes, vinegar, etc.

Formula	Material	Supplier	Pounds	Gallons
Part A				
	EPON Resin 813	Hexion	<u>100</u>	<u>10.56</u>
	Total Part A		100	10.56
Part B				
	EPIKURE Curing Agent 3370	Hexion	11.5	1.38
	EPIKURE Curing Agent 3271	Hexion	<u>11.5</u>	<u>1.35</u>
	Total Part B		23.0	2.73
	Total Part A & B		123.00	13.29

Mixing Instructions Blend curing agents then add the resin portion and blend to a homogeneous state using proper agitation equipment. Avoid entrainment of excessive air in the blend during high speed agitation, but mix thoroughly by agitating at low or moderate speeds for 3 to 5 minutes. An induction time is not necessary for this formulation. Due to its limited pot life apply this system immediately after mixing.

Typical Handling Properties Remove surface contaminants such as dust, dirt, grease and weakened concrete laitance. For optimum performance and cure response, this system should be applied to substrates with surface temperatures above 23 °C. Lower temperatures will require exceedingly long cure times.

This coating can be applied easily by spray, 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 glaze and finish coat applications. Cure for 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 or corrosive chemicals. Because of the chemical composition of this system. Films cured at or below normal room temperature will produce a "sweat out" at the exposed surface. This will not affect the performance characteristics.

Typical Handling Properties Table 1 / Handling and Reactivity

	Units	Value
Combining Ratio (by weight) Resin/Converter		100 : 23
Viscosity at 25 °C, system	cP	400
Gel Time at 25 °C, 100-gram mass	min.	23

Typical Cured State Properties Table 2 / Cured State Properties¹

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Properties

	<u>Units</u>	<u>Value</u>	
Heat Deflection Temperature	°C	61	
Tensile Strength	psi	9,700	
Tensile Elongation	%	2.0	
Tensile Modulus	10 ⁶ psi	0.58	
Izod Impact, notch	ft•lb./inch	0.37	
Hardness	Shore D	89	
Chemical Resistance ²			
<u>Time</u>	<u>Water</u>	<u>5% Acetic Acid</u>	<u>Xylene</u>
1 day	0.09	0.12	0.02
1 week	0.27	0.40	0.10
2 weeks	0.39	0.60	0.15
3 weeks	0.47	0.73	0.21
4 weeks	0.53	0.81	0.33

¹ System cured 7 days at 25 °C.

² Percent weight gain determined on 3-inch by 1-inch by 1/8-inch specimens immersed at 25 °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.

Contact Information

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

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For literature and technical assistance, visit our website at www.hexion.com

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