

Starting Formulation

SF 1006

Gray Enamel

EPON™ Resin 1001-CX-75 / EPIKURE™ Curing Agent 3115-X-70

- Features
- Formulated for conventional spray application
 - Desirable mixing ration of 3 to 1 by volume
 - Formulation contains no ethylene glycol ether solvent

Formula	Material	Supplier	Pounds	Gallons
Part A				
<i>Pigments</i>				
	Ti-Pure™ R-902	Du Pont Company	175.0	5.01
	PFICARB™ 200	Harcros Pigments, Inc	65.0	2.95
	Sparmite™	Harcros Pigments, Inc	20.0	0.55
	Carbon Black LB-1011	Harcros Pigments, Inc	4.0	0.27
	Bentone Slurry pre-blend		8.0	0.76
	Bentone™ 34	Elementis Specialties Inc.		
	95% ethanol in water			
	65/35 by weight			
<i>Vehicle</i>				
	EPON Resin 1001-CX-75	Hexion	301.0	33.44
	Beetle™ U-216-8	Cytec Industries	12.0	1.43
	Methyl isobutyl ketone		64.0	9.68
Let down				
	Propylene glycol methyl ether		76.0	9.89
	Xylene		<u>79.0</u>	<u>11.02</u>
		Total Part A	804.0	75.00
Part B				
	EPIKURE Curing Agent 3115-X-70	Hexion	174.0	22.31
	Methyl isobutyl ketone		<u>18.0</u>	<u>2.69</u>
		Total Part B	192.0	25.00
		Total Part A & B	996.0	100.00

Mixing Instructions

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	<u>Pounds</u>	<u>Gallons</u>
Part A	804.0	75.0
Part B	<u>192.0</u>	<u>25.0</u>
Part A + B	996.0	100.00

Disperse the pigments in a suitable portion of the vehicle using high-speed dispersing equipment, or a sand mill; add Bentone slurry to mix slowly with good mixing. Let down the pigment dispersion with the remaining vehicle and solvents. Charge all of the ingredients of the curing agent component to a suitable container and mix thoroughly. Package the base component and the curing agent component separately to be combined just prior to use.

Typical Handling Properties Slowly combine three parts by volume of the base component with one part by volume of the curing agent component and mix thoroughly. Allow the mixed formulation to "sweat in" for approximately one hour; the system is then ready for application by brush or roller. For spray application, use a thinner consisting of MBK/PGME/Toluene, 45/5/50 by weight. Because of the limited pot life of the mixed formulation, do not mix more material than can be used in a working day.

The application methods for an EPON™ Resin 1001F/EPIKURE™ Curing Agent 3115 Gray Enamel can involve the use of air or airless spray equipment, roller or brush. This system is normally air dried but can be force cured by baking if desired. This operation requires the use of well ventilated facilities (fresh air supply and adequate exhaust) along with the use of OSHA/NIOSH approved respiratory equipment for worker protection. In addition, the worker must wear appropriate protective clothing to avoid skin contact.

Typical Formulation Properties Table 1 / Formulation Properties

	<u>Units</u>	<u>Value</u>
Mix ratio Part A : Part B	By volume	3 : 1
	By weight	4.19 : 1.0
Nonvolatile content by weight	%	62.6
Nonvolatile content by volume	%	47.3
Weight per gallon	lb./gal.	10.0
Pigment : Binder Weight Ratio	%	0.76/1.0
Pigment volume concentration (PVC)	%	19.3
Volatile Organic Compound (VOC)	lb/gal	3.72
	g/L	446
Induction time	hrs	1.0
Potlife	hrs	8+

Cure Schedules Table 2 / Cure Schedules

At ambient temperatures of 70°F to 80°F, this coating will dry to handle in about six hours. Physical properties will be fully developed in about two days. Chemical and solvent resistance will be fully developed in seven days. At ambient temperatures of 55°F, several weeks may be required to produce full cure, as the adduct curing agent used in the formulation has low volatility and will remain in the film to react with the epoxy resin.

	<u>Units</u>	<u>Value</u>
Force dry, to a sandable stage		
100°F	hrs	1.5 – 2
110°F	hrs	1 – 1.5
120°F	min.	45
140°F	min	30

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Force dry, to full cure		
140°F	hrs	1.5
High temperature bake, to full cure		
200°F	min.	20
250°F	min.	10
300°F	min.	7
350°F	min.	4
400°F	min.	2

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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