

# Starting Formulation

SF 1003

Clear Coating

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

- Features
- Formulation contains propylene glycol monomethyl ether as a replacement for ethyleneglycol ether
  - A desirable mixing ratio of 65:35 by volume

Formula	Material	Supplier	Pounds	Gallons
Part A				
	EPON Resin 1001-CX-75	Hexion	446.7	49.09
	Beetle™ 216-8	Cytec Industries	28.1	3.24
	Propylene glycol monomethyl ether (PGME)		56.4	7.37
	Methyl isobutyl Ketone (MIBK)	Shell Chemical Company	<u>35.1</u>	<u>5.28</u>
	Total Part A		566.3	65.00
Part B				
	EPIKURE Curing Agent 3115-X-70	Hexion	215.3	27.60
	Propylene glycol monomethyl ether (PGME)		<u>56.6</u>	<u>7.40</u>
	Total Part B		271.9	35.00
	Total Part A & B		838.2	100.00

## Mixing Instructions

	Pounds	Gallons
Part A	566.3	65.00
Part B	<u>271.9</u>	<u>35.00</u>
Part A + B	838.2	100.00

Charge ingredients of base component to a suitable container and mix thoroughly. Package base component and curing agent component separately to be mixed just prior to use.

## Typical Formulation Table 1 / Formulation Properties Properties

	Units	Value
Mix Ratio, Part A : Part B	by volume	65 : 35
	by weight	2.08:1.0
Nonvolatile content by weight	%	60.0

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Nonvolatile content by weight	%	88.0
Weight per gallon	lb./gal.	8.4

Cure Schedules Table 2 / Cure Schedules

At ambient temperatures of 70 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 35 to 40 °F, several weeks may be required to produce full cure, as the polyamide resin used in the formulation has low volatility and will remain in the film to react with the epoxy resin. Other curing schedules are:

	<u>Units</u>	<u>Value</u>
Force dry, to asandable stage		
100°F	hrs	1.5 – 2
110°F	hrs	1 – 1.5
120°F	min.	45
140°F	min.	30
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
450°F	min.	1

**Typical Handling Properties** When ready to use, add the curing agent component to the base component and mix thoroughly. Because of the limited pot life of the mixed formulation, do not prepare more material than can be used during a working day. Allow the mixed formulation to stand for 30 to 60 minutes before application. A thinner consisting of equal parts by weight MIBK, propylene glycol monomethyl ether and xylene may be used for either spray or brush application. An alternate thinner for spray application is MIBK/Butyl OXITOL™ glycol ether/toluene, 45/5/50 parts by weight.

For application of this system, we recommend the use of an air-supplied hood and other personal protective equipment and clothing sufficient to protect the applicator.

**Storage Recommendations** regarding storage conditions can be obtained by visiting our web site at [www.hexion.com](http://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

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