

## Starting Formulation

SF 8013

### Prepreg Matrix Solvent MIL-R-9300, Type II EPON™ Resin SU-8

**Introduction** This compound is designed for the impregnation of bi-directional fiber cloth or uni-directional tape to form a tacky, drapable prepreg capable of low pressure molding into composites conforming with the requirements of MIL-R-9300, Type II. Pre-preg stock fabricated from this compound can retain its initial tack and drape qualities for approximately 10 days when sandwiched between release film and stored at room temperature. Thermal stability data suggest the utility of this compound in insulation tapes requiring Class F or Class H performance ratings.

Formula	<u>Material</u>	<u>Supplier</u>	<u>Pounds</u>	<u>Gallons</u>
	EPON Resin SU-8	Hexion	100.0	10.10
	Staybelite Ester #10	Hercules, Inc.	2.5	0.27
	Acetone	Shell Chemical Company	70.0	10.61
	Nadic Methyl Anhydride	Anhydrides & Chemicals, Inc.	76.0	7.48
	Diethylaminoethanol	Pennwalt Corp.	<u>0.1</u>	<u>0.01</u>
	Total		248.6	28.47

**Preparation of Laminating Properties** Dissolve the EPON Resin SU-8 epoxy resin and Staybelite Ester #10 into the acetone in a closed tank equipped with a condenser, heating jacket and agitator.

Cool the resin solution below 125 °F and add the Nadic Methyl Anhydride and diethylaminoethanol catalyst. Continue agitation until a uniform, clear solution is obtained.

**Typical Handling Properties** Table 1 / Typical Properties

	<u>Units</u>	<u>Value</u>
Viscosity at 25 °C	cP	100
Density	lbs/gal	8.73
Gel time, stroke cure at 160 °C	sec.	130

**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.

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