

# Starting Formulation

## SF 8012

### Epoxy Body Solder EPON™ Resin 1001F

**Introduction** This formulation is designed to meet handling properties characterized by conventional stick solder applications and to yield superior adhesion and durability. This compound will adhere to most metal surfaces.

Formula	Material	Supplier	Pounds	Gallons
	EPON Resin 1001F	Hexion	66.70	6.87
	Aluminum Powder #120	Reynolds Metals Co.	33.30	1.48
	Dicyandiamide	dicy, SKW Corp.	2.70	0.45
	Benzyl Dimethylamine	Sherwin-Williams Co.	<u>0.007</u>	<u>0.009</u>
		Total	102.707	8.809

**Mixing Instructions** Melt the EPON Resin 1001F in a high shear, steam jacketed mixer such as a Baker-Perkins Sigma Blade mixer, or equivalent, at 120 °C. Add and thoroughly disperse the Aluminum Powder #120 and dicy. Pour the hot blend into polypropylene or metal mold released molds. Then B-stage the material at 140 °C for 1 hour. Cool the mixture to room temperature and remove from molds.

**Application** Heat the substrate to above 200 °C with a soldering iron, torch, or heat gun, then press the stick against the substrate. The deposited epoxy solder may cure sufficiently from the residual heat. Cured state properties are achieved with a heat cure period equivalent to 15 minutes at 220 °C.

#### Typical Handling Properties Table 1 / Handling Properties

	Units	Value
Viscosity		
at 23 °C		Solid
at 200 °C		Free Flowing
Expected Pot Life at 23 °C	months	6

#### Performance Properties Table 2 / Performance Properties

	Units	Value
Hardness,	Shore D	90
Tensile Shear Strength after		
5 minutes at 220 °C	psi	400

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10 minutes at 220 °C	psi	1,875
15 minutes at 220 °C	psi	3,700
20 minutes at 220 °C	psi	3,700
25 minutes at 220 °C	psi	3,800

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

#### General Information

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#### Safety, Storage & Handling

Please refer to the MSDS for the most current Safety and Handling information.

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