

# Technical Data Sheet

## EPON™ Resin 1001F

### Product Description

EPON™ Resin 1001F is a low molecular weight solid epoxy resin derived from a liquid epoxy resin and bisphenol-A. EPON Resin 1001F is used for its application or end-use advantages in both structural and surface-coating applications as follows:

#### Structural applications

Because of the excellent pre-impregnation properties, EPON Resin 1001F is used in:

- Dry lay-up laminates
- Dry filament winding
- Transfer molding compounds

#### Surface coatings

Amine or polyamide cured coatings based on EPON Resin 1001F provide excellent:

- Chemical resistance
- Durability
- Toughness
- Adhesion

Because of these performance properties, amine and polyamide cured coatings are especially useful in maintenance and marine applications.

### Sales Specifications

Property	Value	Unit	Test Method
Color	200	Pt-Co	ASTM D1209
Viscosity at 25°C	7 - 9.6	cP	ASTM D445
Weight per Epoxide	525 - 550	g/eq	ASTM D1652

### Typical Properties

EPON Resin 1001F  
<http://hexioninternet.azurewebsites.net/en-US/product/epon-resin-1001f>

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Property	Value	Unit	Test Method
Bulk Density	36 - 40	lbs/ft <sup>3</sup>	
Esterification Equivalent Weight <sup>1</sup>	145		
Flash Point Setaflash	200 - 0	°F	ASTM D3278
Hydroxyl Content Calculated Value	0.29		
Melting Point	75 - 80	°C	ASTM D-3461
Sodium Content	2	ppm	HC-692A
Viscosity Melt, @ 150°C	600 - 750		ASTM D445-79
Weight per Gallon @ 68°F	10.2	lbs	

<sup>1</sup>Grams of resin required to esterify completely one gram equivalent of monobasic acid: e.g., 280 grams of C18 fatty acid or 60 grams of acetic acid.

## Processing/How to use

### Identification and Classification

Chemical Abstract Service Registry Number: 25036-25-3 (EPA/TSCA inventory designation)

MSDS Number: 184-04

Chemical Designations:

- 2,2-bis(p-glycidioxyphenyl) propane condensation product with 2,2-bis(p-hydroxyphenyl) propane and similar isomers.
- Phenol. 4,4'-(1-methylethylidene)bis-polymer with 2,2'-[[1-methylethylidene)bis-(4,1- phenyleneoxymethylene)]bis(oxirane).

Structural formula, base resin:

### Formulation and Application Information

For epoxy resin amine-cured coatings consult Technical Bulletin, "Formulating Amine-Cured Coatings with EPON Resin".

For adhesives laminating casting and molding applications consult Technical Bulletin, entitled, "EPON Resin Structural Reference Manual".

### FDA Status

For manufacture of epoxy resin esters, consult Technical Bulletin, SC:197, entitled, "EPON Resin Esters".

Several paragraphs in Title 21 of the Code of Federal Regulations permit and regulate the use of epoxy resins such as cured EPON Resin 1001F as indirect food additives in food contact applications. Examples are: 175.105, 175.300, 175.320, 176.170, 176.180, 177.1210 177.2280.

Curing agents for EPON Resin systems are also regulated under several sections of Title 21, for example 175.300 and 177.2280, and are subject to the limitations imposed for these sections and the general requirements of good manufacturing practices.

For further information on the FDA status of EPON Resin products, contact your Hexion Sales Representative or Sales Office.

## Thermosetting acrylic — EPON Resin systems

EPON Resin 1001F is used to upgrade thermosetting acrylic resins into coatings with greatly improved:

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- Adhesion
- Toughness
- Detergent resistance

Because of these specific properties, these systems are used extensively for automotive and appliance primers.

Since solutions of this versatile epoxy resin are the preferred products for most of the aforementioned applications, Hexion provides solutions of EPON Resin 1001F in several solvents to assist customers in handling this product. Contact your Hexion Sales Representative or Sales Office for assistance.

## Safety, Storage & Handling

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

Please refer to the Hexion web site for Shelf Life and recommended Storage 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.

## Packaging

Available in bulk and drum quantities.

## Contact Information

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

[www.hexion.com/Contacts/](http://www.hexion.com/Contacts/)

For literature and technical assistance, visit our website at: [www.hexion.com](http://www.hexion.com)