

Technical Data Sheet

Re-issued September 2007

EPON™ Resin 1002F

Product Description

EPON™ Resin 1002F is a solid epoxy resin derived from a liquid epoxy resin and bisphenol-A. This epoxy resin finds application in solution type coatings, as an intermediate in the preparation of epoxy esters, high performance hot melt adhesives, molding powders, and in powder coatings.

Benefits

- Can be formulated into high performance amine or polyamide cured coatings.
- Exhibits unique melt viscosity for hot melt adhesives.
- Displays a desirable reactivity, rheology and electrical properties in powder coatings.
- This resin will not “block” or sinter even at slightly elevated storage temperatures.
- Filtered during manufacture so final product is very clean.

Sales Specification

Property	Units	Value	Test Method/Standard
Weight per Epoxide	g/eq	600-700	ASTM D1652
Viscosity at 25°C	cP	9.2-13.6	ASTM D445
Color	Pt-Co	200 max.	ASTM D1209

Typical Properties

Property	Units	Value	Test Method/Standard
Melt viscosity @ 150 °C	cP	1200-2200	
Esterification equivalent weight ¹		155	
Hydroxyl content	eq/100g	0.26-0.31	Calculated value
Weight per gallon @ 68 °F	lbs	10.2	
Flash point, Setaflash		>200 °F	ASTM D3278
Bulk density	lbs/ft ³	36-40	
Sodium content ²	ppm	0-2	
Melting point	°C	80-88	ASTM D3461

¹Grams of resin required to esterify completely one gram equivalent of monobasic acid; e.g., 280 grams of C18 fatty acid of 60 grams of acetic acid.

²ASTM D 3461 (Mettler Melt Point, 1 °C/minute)

Processing/How to use

Identification and Classification

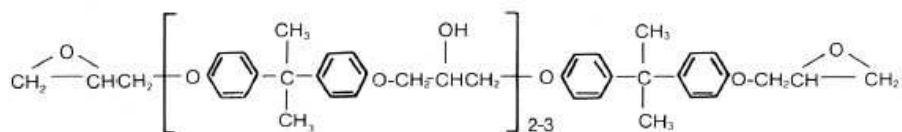
Chemical Abstract Service Registry Number: 25036-25-3 (EPA/TSCA inventory designation)

MSDS Number: 185-02

Chemical Designations:

- 2,2-bis(p-glycidyloxyphenyl) 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:



Packaging, Storage and Shipping

EPON Resin 1002F is a stable material produced in flake form and packaged in a 50-pound net three-ply kraft paper bag. The product is not prone to sintering or “blocking”; however, it should be stored in an area where the temperature does not exceed 80 °F and where it is protected against moisture. EPON Resin 1002F is not a hazardous material according to Department of Transportation regulations (Code of Federal Regulations, Title 49).

Formulation and Application Information

For epoxy resin amine-cured coatings consult Hexion Technical Brochure “Formulating AmineCured Coatings with EPON Resin”.

For adhesives, casting and molding applications consult Hexion Technical Brochure entitled “EPON Resin Structural Reference Manual”.

For manufacture of epoxy resin esters consult the Hexion Technical Brochure entitled “EPON Resin Esters.”

FDA Status

Several paragraphs in Title 21 of the Code of Federal Regulations permit and regulate the use of epoxy

resins such as cured EPON Resin 1002F 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.

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, call our toll-free customer service number at: 1-877-859-2800

For literature and technical assistance, visit our website at: www.hexion.com

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PDS-4025- (Rev.2/3/2015 11:53:41 AM)