

Technical Data Sheet

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EPON™ Resin 825

Product Description

EPON™ Resin 825 is a high purity bisphenol A epichlorohydrin epoxy resin. As a result, the viscosity of this product is lower than standard bisphenol A liquid resins without the use of diluents or modifiers.

Resin/curing agent systems based on EPON 825 have greater clarity, chemical resistance, higher heat distortion temperature, and lower electrical conductivity than can be obtained with most other standard resins.

Due to the high purity, the resin may form crystals. The crystals can be converted to liquid without damaging the resin by opening the drum bung and heating between 45 °C (113 °F) and 50 °C (122 °F). The tendency to crystallize can also be reduced by adding either 5% to 10% of para-tertiary-butyl phenol glycidyl ether or 20% to 30% of EPON Resin 862, a bisphenol F (BPF) epoxy resin.

Application Areas/Suggested Uses

- Blend with high performance multifunctional epoxy resins to reduce viscosity
- Electrical castings and encapsulations
- Low volatile organic compound (VOC) coatings
- Aerospace and specialty adhesives

- Specialized tooling

Benefits

- Low viscosity
- Low color
- Reacts with a full range of curing agents
- Produces high-strength cured systems resistant to chemical attack

Sales Specification

Property	Units	Value	Test Method/Standard
Weight per Epoxide	g/eq	175 – 180	ASTM D1652
Viscosity at 25°C	P	50 – 65	ASTM D445
Color	Gardner	1 max.	ASTM D1544

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Typical Properties

Property	Units	Value	Test Method/Standard
Density at 25°C	lb/gal	9.7 – 9.8	ASTM D1475
Saponifiable chloride	% wt.	0.03 max.	
Sodium ¹	ppm	2 max.	

¹ Plant Method HC 692A-85 , Determination of Sodium in EPON Resins-MIBK Solutions (Extraction-Ion Selective Electrode Method)

General Information

With EPON Resin 825 you get the convenience of a low viscosity resin without the presence of a diluent which can lower performance properties of cured systems. Also, you get better performance from cured systems than can be obtained using similar resins which are less pure and higher in viscosity. EPON Resin 825 has these benefits because, unlike other resins, it is composed mainly of a single molecular structure. In general you can expect to obtain castings with EPON Resin 825 which have high heat distortion temperature.

The low color of EPON Resin 825 will produce low color castings suitable for such optically demanding applications as LEDs and LCDs. The low viscosity permits degassing at high vacuum even at elevated temperatures to avoid bubble formation in the final product.

EPON Resin 825 can be used with all of the curing agents common to EPON Resin 828 systems. This provides a full range of curing temperatures, pot life and handling characteristics to choose from.

FDA

Several paragraphs in Title 21 of the Code of Federal Regulations permit and regulate the use of epoxy resins such as cured EPON Resin 825 as an indirect food additive in food contact applications. Examples are: 175.105, 175.300, 175.320, 176.170, 176.180, 177.1210, and 177.2280.

Curing Agents for EPON Resin systems are also regulated under paragraph 175.300 of Title 21 and are subject to the limitations imposed for this section and the general requirements of good manufacturing practices.

For further information on the FDA status of EPON Resin products, contact your HEXION Representative.

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.

Because of its high purity EPON Resin 825 may crystallize on standing or in storage. It may be converted to liquid by opening the drum bung and heating between 45 °C (113 °F) and 50 °C (122 °F).

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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