

Technical Data Sheet

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EPON™ Resin 813

Product Description

EPON™ Resin 813 is a low viscosity liquid bisphenol-A based epoxy resin diluted with cresyl glycidyl ether.

Application Areas/Suggested Uses

- Adhesives
- Flooring
- Electrical casting and encapsulation
- Grouting compounds
- Contact and vacuum bag laminating
- High solids and solventless coatings

Benefits

- Low viscosity for easy pumping and handling
- Reacts with full range of curing agents at low temperatures
- Produces high-strength cured systems resistant to chemical attack
- Slightly lower odor than butyl glycidyl ether diluted epoxy resins (EPON Resin 815C type)
- Less prone to crystallization than other diluted epoxy resins

Sales Specification

Property	Units	Value	Test Method/Standard
Weight per Epoxide	g/eq	180 – 195	ASTM D1652
Viscosity at 25°C	P	5 – 7	ASTM D445
Color	Pt-Co	75 max.	ASTM D1209

Typical Properties

Property	Units	Value	Test Method/Standard
Specific Gravity	g/ml	1.14	
Density at 25°C	lb/gal	9.5	ASTM D1475

Flash Point, Setaflash	°F	>199	ASTM D3278
Vapor Pressure at 20°C ¹	mm Hg	Negligible	
Physical Form		Liquid	

¹Vapor pressure of pure cresyl glycidyl ether.

Processing/How to use

General Information

EPON Resin 813 provides several benefits compared to higher viscosity resins. It is easier to handle and flows out and wets surfaces better. In addition, entrained air escapes more easily from systems during cure, producing almost bubble-free products. Higher concentrations of filler can be used with EPON Resin 813 giving cured systems reduced cost, lower cure shrinkage, lower coefficient of thermal expansion and higher compressive strength.

EPON Resin 813 can be used with all of the curing agents, common to EPON Resin 828 systems. This permits a full range of curing temperatures, pot life and handling characteristics to choose from.

EPON Resin 813 systems give excellent service at moderate temperatures for long periods. They are commonly used in formulations for electrical castings and encapsulations and adhesives. They are especially useful in contact and pressure vacuum bag laminating, giving superior wet out and glass loading of up to 70%. They provide high adhesive strength to a variety of metal and non-metal surfaces. The rapid room temperature cure of EPON Resin 813 with aliphatic amines makes it ideal for adhesives for fabrication, tooling, grouting compounds, and high solids and solventless coatings.

FDA Status

EPON Resin 813 is not listed in 21 CFR 175.300 and is not recommended for food contact applications.

Chemical Abstract Service Registry Number:

No CAS Registry number has been assigned to EPON Resin 813 since the product is a mixture. CAS Registry numbers for components of EPON Resin 813 include:

- Base Resin: 25068-38-6
- Reactive diluent (Cresyl Glycidyl Ether): 2210-79-9

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.

While EPON Resin 813 is less prone to crystallize in storage when compared to other diluted epoxy resins, if crystallization does occur it may be reliquidified by warming to 120 °F. Product should be stored above 40 °F to minimize this problem.

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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