

# Technical Data Sheet

## HELOXY™ Modifier 107

### Product Description

HELOXY™ Modifier 107 is the diglycidyl ether of cyclohexane dimethanol. While it is primarily used as a reactive diluent or viscosity reducing modifier for epoxy resin formulations, it also can effectively serve as a reactive intermediate for further synthesis of various cycloaliphatic based resins.

### Application Areas/Suggested Uses

- To improve air release and wetting characteristics or to increase pot life in electrical, potting, encapsulation, and impregnation applications
- To maintain high reactivity yet provide workable viscosity at room temperature when using novolac or other high functionality epoxy resins

### Benefits

- Reduces viscosity of epoxy formulations while maintaining most cured state properties
- Provides excellent cured state resistance to creep or deformation under high stress
- Is an effective means of incorporating a cycloaliphatic structure into the polymer chain

### Sales Specifications

Property	Value	Unit	Test Method
Color	1 max.	Gardner	ASTM D1544
Epichlorhydrin	10 max.	mg/kg	SMS 2445
Viscosity at 25°C	55 - 75	cP	ASTM D445
Weight per Epoxide	155 - 165	g/eq	ASTM D1652

### Typical Properties

Property	Value	Unit	Test Method
Density	9 - 9.2	lbs/gal	ASTM D1475
Flash Point Setflash	>200	°F	

### General Information

HELOXY Modifier 107 is fully compatible with the entire bisphenol A based series of epoxy resins as well as higher functionality epoxy resins. Concentrations of up to 40 percent of

HELOXY Modifier 107  
<http://hexioninternet.azurewebsites.net/en-US/product/heloxymodifier-107>

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HELOXY Modifier 107 have been employed for viscosity reduction. Performance properties of systems containing this resin are maintained at higher modifier concentrations than is possible with monoepoxide diluents and most diepoxide diluents.

Effect of HELOXY Modifier 107 modifications on the properties of various EPON™ Resin 828 based systems is demonstrated by data presented in Table 1. Substituting HELOXY Modifier 107 for Epon Resin 828 or other unmodified resins generally results in slight increases in flexibility. As with all diluting modifiers, use of HELOXY Modifier 107 decreases chemical resistance and elevated temperature performance. To minimize such losses, the lowest concentration of HELOXY Modifier 107 necessary to obtain desired reduction in viscosity should be used. The viscosity reduction efficiency of HELOXY Modifier 107 when blended with Epon Resin 828 is compared to that of other HELOXY Modifiers by data illustrated in Figure 1.

When formulating with HELOXY Modifier 107, the concentration of curing agent to be used will likely be different than in the case of an unmodified system. The proper curing agent combining ratio should always be calculated in order to ensure proper stoichiometric balance.

Figure 1 / Viscosity Dilution Effectiveness of HELOXY Modifiers



## 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.

HELOXY Modifier 107 should be stored in tightly sealed containers in a dry location at normal room temperature. Some epoxy material can crystallize during storage. The tendency to do so is affected by storage conditions, composition, and other factors. Should crystallization occur, it may be converted to liquid by opening the drum bung and gently warming to temperatures not to exceed 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, 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)