

Technical Data Sheet

HELOXY™ Modifier 62

Product Description

HELOXY™ Modifier 62 is a commercial grade of o-cresyl glycidyl ether. A low viscosity aromatic monoepoxide, its primary use is the viscosity reduction of conventional epoxy resin systems.

Benefits

- Reduces viscosity of higher molecular weight aromatic epoxy resins
- Excellent retention of mechanical and chemical resistance cured state properties relative to other monoepoxides
- Low volatility
- Improves substrate and filler wetting of conventional formulations

Sales Specifications

| Property | Value | Unit | Test Method |
|--------------------|-----------|-------|-------------|
| Color | 100 max | Pt-Co | ASTMD1209 |
| Epichlorohydrin | 20 max | mg/kg | SMS 2445 |
| Viscosity at 25°C | 5 - 10 | cP | ASTMD445 |
| Weight per Epoxide | 175 - 195 | g/eq | ASTMD1652 |

Typical Properties

| Property | Value | Unit | Test Method |
|----------|-----------|---------|-------------|
| Density | 8.9 - 9.1 | lbs/gal | ASTMD1475 |

General Information

HELOXY 62 is compatible with virtually all classes of epoxy resins used in thermoset plastics and protective coatings applications.

As with any monoepoxide, modification of basic epoxy resins with HELOXY 62 reduces the average epoxide functionality of the mixture thereby lowering cured state chemical and solvent resistance and thermal performance. However, due to the highly aromatic structure of HELOXY 62, compromises in these properties are found to be minimized relative to those associated with other monoepoxides commonly used in the viscosity reducing modification of epoxy formulations.

The relatively low molecular weight of HELOXY 62 makes it among the most efficient of the aromatic monoepoxides in reducing viscosity of basic epoxy resins. A comparison of this characteristic to that of other representative Heloxy modifiers is illustrated in Figure 1. Since the degree to which performance properties are affected depends on the amount of Heloxy 62 in the formulation, the amount used should be limited to that necessary to yield the required viscosity reduction. The maximum recommended quantity of Heloxy 62 is about 30 percent of the resin portion. Curing agents that are recommended for satisfactory crosslinking of unmodified basic liquid epoxy resins can also be used with compositions containing HELOXY 62. Since the average weight per epoxide of HELOXY 62 is virtually identical to that of commercial liquid bisphenol A-based epoxy resins, differences in epoxy content due to HELOXY 62 modifications are normally insignificant and adjustments in curing agent combining ratio to maintain proper stoichiometry with HELOXY 62 modified blends is usually unnecessary.

As previously stated, the cured state properties at room temperature of epoxy formulations are not seriously affected when viscosity reduction is attained via HELOXY 62 unless excessive amounts are used. However, performance at elevated service temperatures may be reduced considerably. Data listed in Table 1 illustrate the effect of HELOXY 62 on systems cured with various curing agents, including conventional polyamines, anhydrides, and EPIKURE™ 3072 Curing Agent. A preblend of HELOXY 62 and a standard bisphenol A based epoxy resin at a viscosity selected for ease of handling is available as EPON™ Resin 813. For information on the properties and suggested uses of this resin, please consult the appropriate product bulletin.

HELOXY Modifier 62

<http://www.westlakeepoxy.com/en-US/product/heloxymodifier-62>

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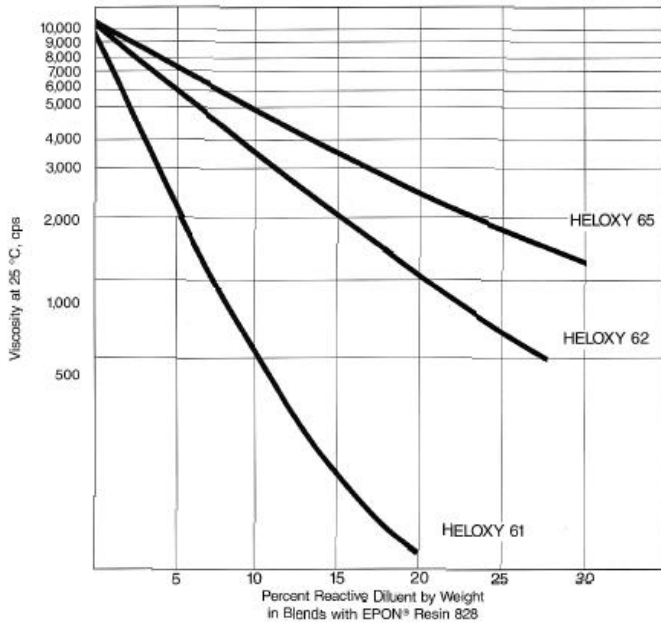
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Figure 1 / Viscosity dilution effectiveness of HELOXY Modifiers



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.

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/

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