

Technical Data Sheet

HELOXY™ Modifier 61

Product Description

HELOXY™ Modifier 61 is a commercial grade butyl glycidyl ether. A low viscosity, virtually colorless monoepoxide, it is widely used in the viscosity reducing modification of epoxy resin formulations.

Benefits

- Most efficient epoxy resin viscosity reduction of all common epoxy functional modifiers
- Outstanding substrate and filler wetting characteristics
- Excellent retention of physical strength and thermal properties of base formulations

Sales Specifications

Property	Value	Unit	Test Method
Color	1	Gardner	ASTMD1544
Viscosity at 25°C	1 - 2	cP	ASTMD445
Weight per Epoxide	140 - 155	g/eq	ASTMD1652

Typical Properties

Property	Value	Unit
Density	7.6 - 7.8	lbs/gal

General Information

The relatively low molecular weight of HELOXY 61 makes it the most efficient common monoepoxide in reducing the viscosity of basic epoxy resin formulations. A comparison of this property to that of other representative Heloxy modifiers is illustrated in Figure 1.

As with any monoepoxide, modification of basic epoxy resins with HELOXY 61 reduces the average functionality of the mixture thereby lowering overall cured state performance. However, due to its excellent viscosity reduction characteristics, relatively low levels of HELOXY 61 are normally needed to attain desired viscosity reductions and these compromises in performance properties are held to a minimum. In any application, the amount of HELOXY 61 used in the formulation should be limited to that necessary to yield the required viscosity reduction. The maximum recommended quantity of HELOXY 61 is about 20 percent by weight of the resin portion.

HELOXY 61 is compatible with other epoxy resins in all proportions and is easily blended with liquid resins at room temperature. If preferred, a pre-blend of HELOXY 61 and a standard bisphenol A based liquid epoxy resin at a viscosity selected for easy handling is available as EPON™ Resin 815C. For information on properties and suggested uses of this resin, please consult the appropriate product literature.

Curing agents that are recommended for unmodified basic liquid epoxy resins can also be used with compositions containing HELOXY 61. When calculating the proper stoichiometric amount of curing agent to be used with HELOXY 61 modified resins, differences in epoxy content of the resin resulting from this modification are small and can generally be ignored at modification levels below 10 parts per hundred resin (phr).

Unless excessive amounts of HELOXY 61 are used, the physical properties of the cured systems are not seriously affected at room temperature. However, physical and electrical properties at elevated temperatures may be reduced considerably. Data listed in Table 1 illustrate the effect of HELOXY 61 on systems cured with various curing agents including conventional polyamines, anhydrides, and EPIKURE™ 3072 Curing Agent.

Figure 1 / Viscosity reduction with HELOXY Modifiers

HELOXY Modifier 61

<https://hexioninternet-hexioninternet-slave.azurewebsites.net/en-US/product/heloxxy-modifier-61>

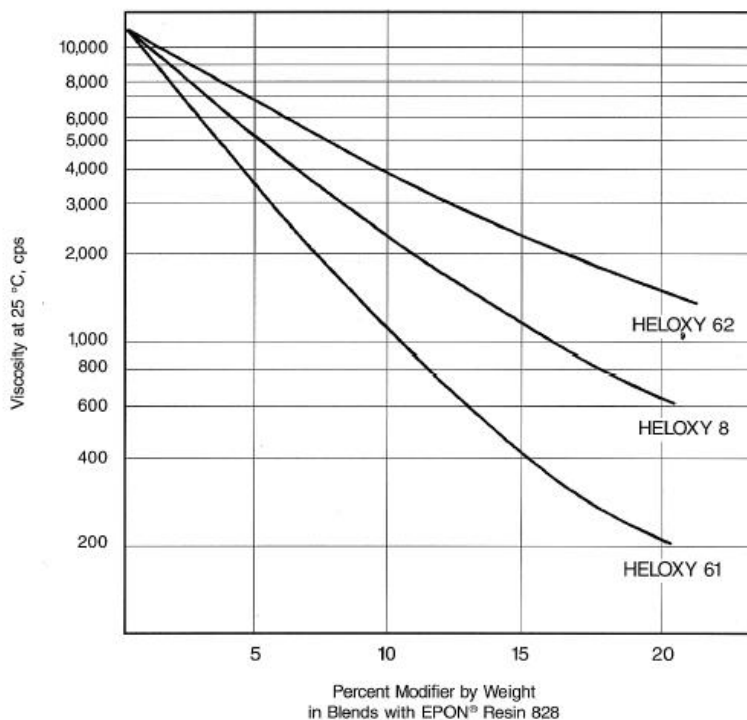
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Please refer to the Hexion web site for Shelf Life and recommended Storage information.

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Contact Information

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