

DESCRIPTION

Epodil 741 reactive diluent is a technical grade of butyl glycidyl ether. It is a monofunctional reactive diluent used to reduce the viscosity of epoxy resin systems.

ADVANTAGES

- Maximum viscosity reduction with a minimum loss of properties
- Allows increased filler loading

APPLICATIONS

- Tooling
- Electrical applications
- Flooring, mortars and grouts
- High and 100%-solids coatings

SHELF LIFE

At least 36 months from the date of manufacture in the original sealed container at ambient temperature. Store away from excessive heat and humidity in tightly closed containers.

STORAGE AND HANDLING

Refer to the Safety Data Sheet for Epodil 741 reactive diluent.

TABLE 1: TYPICAL PROPERTIES

Appearance	Clear Liquid
Color (Gardner) (max)	1
Viscosity @ 77°F (cP) (max)	2
Specific Gravity @ 77°F	0.910
Flash Point (Setaflash) (°F)	137
Hydrolyzable Chloride (max)	0.1
Residual Epichlorohydrin (ppm max)	10
Weight per Gallon (lb/gal)	7.6-7.9
Moisture Content (% max)	0.2
Equivalent Wt/{H}	150
Recommended Use Level	See Table

TABLE 2: SUPPLEMENTARY DATA

Epodil 741 reactive diluent can be used as follows to lower the viscosity of a standard Bisphenol-A liquid epoxy resin (EEW=190) with an initial viscosity of 12,500 cP:

Weight Percent Epodil 741 (%)	Viscosity @ 77°F (cP)
5	2,000
10	500
15	350
20	150

EXAMPLE IMPACT OF DILUENT ON A SIMPLE FORMULATED SYSTEM

Evonik recommends that the formulator test reactive diluents in their system for performance. The following data is provided as an example of the impact of the reactive diluent on a simple formulated system.

SYSTEM:

- BADGE with 12.5 wt% Epodil 741
- Cured with Ancamine® 1618 curing agent at 1:1 stoichiometry

Property	Without Epodil 741	With Epodil 741
Persoz hardness² at 23°C (1 day/7day)	195/310	98/303
Phase 3 dry time³ (h)	7:10	7:55
Tg⁴ (1st scan)	51	46
Gel time⁵ (min)	55	82

² BYK Persoz pendulum tester according to ISO 1522 with 10 mil WFT at 23°C/50% RH

³ 6 mil WFT BK Drying time recorder according to ASTM D5895 with 6 mil WFT at 23°C/50% RH

⁴ TA Instruments DSC model Q200 first scan data

⁵ 150g mix using TECHNE Gel-timer

Epoxy Curing Agents and Modifiers

EPODIL[®] 741 Reactive Diluent

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