

Product information

EPODIL[®] 733

Reactive Diluent

DESCRIPTION

Epodil 733 is a tri-functional reactive diluent. It is Glycerol triglycidyl ether. Epodil 733 maintains high cross-link density and physical properties. Epodil 733 is most commonly used in adhesives and composites.

TYPICAL PROPERTIES

Property	Value	Unit
Color	60 (max)	APH A
Viscosity @ 104°F	200-300	cP
Specific Gravity @ 104°F	1.24	
Flash Point (Setaflash)	>200	°F
Hydrolyzable Chloride	max 0.3	
Residual Epichlorohydrin	max 8	ppm
Weight per Gallon	10.34	lb/gal
Moisture Content	max 0.1	%
Equivalent Wt{H}	150-160	
Recommended Use Level (EEW=190)	See Table	

ADVANTAGES

- Highly compatible with epoxy
- Minimal impact on physical properties
- Minimal impact on cure speed and gel time

APPLICATIONS

- 2K adhesives
- Structural composites such as fiberglass reinforced pipe
- Electrical potting and encapsulation
- Industrial 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 733 reactive diluent.

SUPPLEMENTARY DATA

Weight Percent Epodil 733 (%)	Viscosity @ 77°F (cP)
Epodil 733 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 13,700 cP:	
5	10,900
10	8000
15	5700
20	4250

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 733
- Cured with Ancamine[®] 1618 curing agent at 1:1 stoichiometry

Property	Without Epodil 733	With Epodil 733
Persoz hardness ² at 23°C (1 day/7day)	195/310	154/303
Phase 3 dry time ³ (h)	7:10	8:00
Tg ⁴ (1st scan)	51	50
Gel time ⁵ (min)	55	51

(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

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