

Product information

EPODIL[®] 749

Reactive Diluent

DESCRIPTION

Epodil 749 is neopentyl glycol diglycidyl ether used to reduce the viscosity of epoxy resin systems. It is a difunctional reactive diluent, which provides good viscosity reduction with minimal reduction in physical properties.

TYPICAL PROPERTIES

Property	Value	Unit
Appearance	Clear Liquid	
Color	1 max	Gardner
Viscosity @ 77°F	10-25	mPa.s
Specific Gravity @ 77°F	1.04	°F
Flash Point (Setaflash)	> 93	°F
Equivalent Wt{Epoxy}	130-145	
Free Water	0.2 max	%
Hydrolyzable Chloride	0.1 max	%
Free Epichlorohydrin	10 max	ppm

ADVANTAGES

- Good dilution efficiency
- Low volatility
- Good maintenance of properties

APPLICATIONS

- Laminates
- Flooring and mortars
- Potting and encapsulation

SHELF LIFE

At least 12 months from the date of manufacture in the original sealed container at ambient temperature.

STORAGE AND HANDLING

Refer to the Safety Data Sheet for Epodil 749 reactive diluent.

RECOMMENDED USAGE

Weight Percent Epodil 749 (%) ³	Viscosity @ 77°F (mPa.s) ²
Epodil 749 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:	
5	5,000
10	2,500
15	1,300
20	900
25	650

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 749
- Cured with Ancamine[®] 1618 curing agent at 1:1 stoichiometry

Property	Without Epodil 749	With Epodil 749
Persoz hardness ² at 23°C (1 day/7day)	195/310	96/293
Phase 3 dry time ³ (h)	7:10	9:31
Tg ⁴ (1st scan)	51	48
Gel time ⁵ (min)	55	55

(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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