

Product information

EPODIL[®] 747

Reactive Diluent

DESCRIPTION

Epodil 747 reactive diluent is an aliphatic glycidyl ether comparable to Epoxide 7.1 It is a monofunctional reactive diluent used to reduce the viscosity of epoxy resin systems. Since monofunctional diluents, in general, cause molecular weight chain termination, the minimum amount necessary to achieve the desired viscosity reduction should be used.

Epodil 747 reactive diluent is particularly useful where low volatility levels are required so that problems in poorly ventilated areas are minimized.

TYPICAL PROPERTIES

Property	Value	Unit
Appearance	Clear Liquid	
Color	1	Gardner
Viscosity @ 77°F	9	cP
Specific Gravity @ 77°F	0.900	
Flash Point (Setaflash)	>200	°F
Hydrolyzable Chloride	max 0.1	
Residual Epichlorohydrin	max 10	ppm
Residual Epichlorohydrin	max 7.5	ppm
Moisture Content	max 0.1	%
Equivalent Wt/{H}	228	
Recommended Use Level (EEW=190)	See Table	phr

ADVANTAGES

- Efficient viscosity reduction
- Low volatility
- Increased pot life
- Improves flexibility

APPLICATIONS

- Flooring, mortars and grouts
- High- and 100%-solids coatings
- Laminates
- Potting compounds

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 747 reactive diluent.

SUPPLEMENTARY DATA

Weight Percent Epodil 747 (%)	Viscosity @ 77°F (cP)
Epodil 747 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	4,000
10	1,050
15	500
20	300

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 747
- Cured with Ancamine[®] 1618 curing agent at 1:1 stoichiometry

Property	Without Epodil 747	With Epodil 747
PersoZ hardness ² at 23°C (1 day/7day)	195/310	62/275
Phase 3 dry time ³ (h)	7:10	10:10
Tg ⁴ (1st scan)	51	52
Gel time ⁵ (min)	55	73

- (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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