

DESCRIPTION

Epodil 777 reactive diluent is a diglycidyl ether of polypropylene glycol intended for epoxy resins systems. It provides improved flexibility while reducing the viscosity of the system. Epodil 777 applications include civil engineering, electrical potting and encapsulation.

ADVANTAGES

- Improved impact resistance
- Improved cure speed

APPLICATIONS

- Flooring, mortars and grouts
- Electrical potting and encapsulation

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 777 reactive diluent.

TABLE 1: TYPICAL PROPERTIES

Color (APHA)	60 (max)
Viscosity @ 77°F (cP)	25-45
Specific Gravity @ 77°F	1.05
Flash Point (Setaflash) (°F)	214
Hydrolyzable Chloride (max)	0.3
Residual Epichlorohydrin (ppm max)	8
Weight per Gallon (lb/gal)	8.76
Moisture Content (% max)	0.1
Equivalent Wt/{H}	294-333
Recommended Use Level (phr, EEW=190)	See Table

TABLE 2: SUPPLEMENTARY DATA

Epodil 777 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:

Weight Percent Epodil 777 (%)	Viscosity @ 77°F (cP)
5	8220
10	5160
15	3180
20	2210

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 777
- Cured with Ancamine® 1618 curing agent at 1:1 stoichiometry

Property	Without Epodil 777	With Epodil 777
Persoz hardness² at 23°C (1 day/7day)	195/310	74/271
Phase 3 dry time³ (h)	7:10	9:55
Tg⁴ (1st scan)	51	47
Gel time⁵ (min)	55	62

Footnotes

- (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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