

DESCRIPTION

Epodil 794 reactive diluent is a difunctional reactive diluent for epoxy systems. Epodil 794 is resorcinol diglycidyl ether. Epodil 794 has excellent compatibility with the epoxy system and very good retention of properties. Epodil 794 may crystallize at room temperature but will return to its normal clarity after warming to 100-140°F for approximately 1 hour.

ADVANTAGES

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

APPLICATIONS

- Electrical potting and encapsulation
- Flooring
- 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 794 reactive diluent.

TABLE 1: TYPICAL PROPERTIES

Color (APHA)	n/a
Viscosity @ 104°F (cP)	50-610
Specific Gravity @ 104°F	1.21
Flash Point (Setaflash) (°F)	>200
Hydrolyzable Chloride (max)	0.3
Residual Epichlorohydrin (ppm max)	200
Weight per Gallon (lb/gal)	10.09
Moisture Content (% max)	1.0
Equivalent Wt/{H}	118-133
Recommended Use Level (phr, EEW=190)	See Table

TABLE 2: SUPPLEMENTARY DATA

Epodil 794 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 794 (%)	Viscosity @ 77°F (cP)
5	10,000
10	7750
15	5750
20	4350

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 794
- Cured with Ancamine® 1618 curing agent at 1:1 stoichiometry

Property	Without Epodil 794	With Epodil 794
Perso hardness² at 23°C (1 day/7day)	195/310	169/310
Phase 3 dry time³ (h)	7:10	7:55
Tg⁴ (1st scan)	51	51
Gel time⁵ (min)	55	47

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

EVONIK CORPORATION

7201 Hamilton Blvd.
Allentown, PA 18195
1 800 345-3148
Outside U.S. and Canada 1 610 481-6799

For Technical Information and Support:

Americas: picus@evonik.com
EMEA: apcse@evonik.com

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