

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.

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.

TABLE 1: TYPICAL PROPERTIES

Appearance	Clear Liquid
Color (Gardner)	1 max
Viscosity @ 77°F (25°C), [mPa.s]	10-25
Flash Point (closed cup) [°C]	>93
Specific Gravity @ 70°F (21°C), [g/ml]	1.04
Equivalent Wt/{Epoxide}	130-145
Free Water [%]	0.2 max
Hydrolyzable Chloride [%]	0.1 max
Free Epichlorohydrin [ppm]	10 max

TABLE 2: RECOMMENDED USAGE

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:

Weight Percent Epodil 749 (%)³	Viscosity @ 77°F (25°C) (mPa.s)²
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 hardness² at 23°C (1 day/7day)	195/310	96/293
Phase 3 dry time³ (h)	7:10	9:31
Tg⁴ (1st scan)	51	48
Gel time⁵ (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

Epoxy Curing Agents and Modifiers

EPODIL[®] 749 Reactive Diluent

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

Disclaimer

The information contained herein is offered without charge for use by technically qualified personnel at their discretion and risk. All statements, technical information and recommendations contained herein are based on tests and data which we believe to be reliable, but the accuracy or completeness thereof is not guaranteed and no warranty of any kind is made with respect thereto.

