

Product information

EPODIL[®] 746

Reactive Diluent

DESCRIPTION

Epodil 746 reactive diluent is an aliphatic glycidyl ether, specifically 2-ethylhexyl glycidyl ether (EHGE). The product 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 746 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	2	Gardner
Viscosity @ 77°F	9	cP
Specific Gravity @ 77°F	0.910	°F
Flash Point (Setaflash)	>200	°F
Hydrolyzable Chloride	max 0.1	
Residual Epichlorohydrin	max 10	ppm
Weight per Gallon	7.5-7.7	lb/gal
Moisture Content	max 0.1	%
Equivalent Wt/{H}	220	
Recommended Use Level	See Table	

ADVANTAGES

- Efficient viscosity reduction
- Low volatility
- Improved flexibility

APPLICATIONS

- Flooring, mortars and grouts
- Laminates
- Potting compounds
- High and 100%-solids 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 746 reactive diluent.

SUPPLEMENTARY DATA

Weight Percent Epodil 746 (%)	Viscosity @ 77°F (cP)
Epodil 746 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	1,100
15	650
20	350

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 746
- Cured with Ancamine[®] 1618 curing agent at 1:1 stoichiometry

Property	Without Epodil 746	With Epodil 746
PersoZ hardness ² at 23°C (1 day/7day)	195/310	62/281
Phase 3 dry time ³ (h)	7:10	9:46
Tg ⁴ (1st scan)	51	49
Gel time ⁵ (min)	55	75

- (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

Epodil[®] is a registered trademark of Evonik Industries AG or one of its subsidiaries.

Disclaimer

This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Evonik assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. EVONIK EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Evonik reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice.

EVONIK OPERATIONS GMBH

Business Line Crosslinkers
Paul-Baumann-Str. 1
45764 Marl
Germany

www.evonik.com/crosslinkers

Product Information: APCSE@evonik.com

Sample Request: APCSE@evonik.com

EVONIK CORPORATION

Business Line Crosslinkers
7001 Hamilton Boulevard
Trexlerstown, PA 18087
USA

CrosslinkersProinfo@evonik.com

Crosslinkers-Samples@evonik.com

EVONIK SPECIALTY CHEMICALS (SHANGHAI) CO., LTD.

Business Line Crosslinkers
55, Chungong Road
Xinzhuang Industry Park
Shanghai, 201108
China

CL-Asiainfo@evonik.com

CL-Asiainfo@evonik.com

