

Technical Data Sheet

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EPIKURE™ Curing Agent 3274

Product Description

EPIKURE™ Curing Agent 3274, a moderately reactive, low viscosity aliphatic amine, is water insensitive and resists “blushing” “bloom” and “sweat-out” in epoxy compositions cured in high humidity environments. Other features are light color, improved color retention as compared to conventional amine cured epoxy systems, and long pot life.

Application Areas/Suggested Uses

- Glaze and sealer high-build coatings for decorative flooring
- Laminating binders
- Adhesive and encapsulating compounds
- Miscellaneous casting applications

Benefits

- Low color
- Blush free
- Sweat free

Sales Specification

Property	Units	Value	Test Method/Standard
Amine as KOH	mg/g	305 – 325	ASTM D2896
Viscosity at 25°C	cP	40 – 60	ASTM D2196
Color	Gardner	1 max.	ASTM D1544

Typical Properties

Property	Units	Value	Test Method/Standard
Equivalent weight, approx.		76	
Pounds/gallon @ 25 °C	lbs/gal	7.93	ASTM D1475
Flash Point	°F	>200	Setaflash

General Information

Possessing excellent compatibility with liquid epoxy resins, EPIKURE Curing Agent 3274 does not require an induction period to produce cured glossy surfaces even under adverse humidity conditions. Due to the great difference in viscosities between this curing agent and most liquid epoxy resins, thorough blending may take longer than usual to achieve. A mixing period of 2 or 3 minutes is usually adequate to ensure a homogeneous solution of resin and curing agent. Flow control agents such as urea-formaldehyde resin, colloidal silica, SR-82 silicone resin¹, Modaflow flow control agent² or various thixotropes should be incorporated into high-build coatings to ensure good film continuity.

Cure rate is proportional to temperature and application thickness. For 5 mil films of EPON™ Resin 828/ EPIKURE 3274 systems, tack-free cure is obtained in approximately 12 hours at 25 °C. Incorporation of flexibilizers such as HELOXY™ Modifiers 32 and 505 or monoepoxide diluents generally extend the working life and lengthen the cure period required. If increased reactivity is desired, EPIKURE Curing Agents 3270 or 3271 may be blended with EPIKURE 3274.

Performance Properties

In combination with unmodified EPON Resin 828 at ratios of 36 to 42 parts per 100 parts resin, EPIKURE Curing Agent 3274 imparts strong, rigid cured state properties. Relatively little flexibilizer or monoepoxide diluent modification (generally less than 20 percent) is required to develop high extensibility and excellent impact resistance. The handling characteristics and cured state properties of the several compositions presented in Table 1 illustrate the versatility of EPIKURE Curing Agent 3274 systems.

Table 1 / **Properties of Systems Cured with EPIKURE Curing Agent 3274**

	Method	Units	A	B	C	D	E	F
EPON™ Resin 828		pbw	100	90	80	75	85	90
HELOXY™ Modifier 32		pbw	---	10	20	---	---	---
HELOXY Modifier 505		pbw	---	---	---	25	---	---
HELOXY Modifier 44		pbw	---	---	---	---	15	---
HELOXY Modifier 8		pbw	---	---	---	---	---	10
EPIKURE Curing Agent 3274		pbw	40	37	35	33	41	38

Handling Properties @ 25°

C

Viscosity		cP	1,210	840	600	710	840	530
Gel Time, 100 gram mass		minutes	135	210	315	230	150	225
Cure Schedule		wk/°C	2/25	2/25	2/25	2/25	2/25	2/25

Cured State Properties ¹

Tensile Strength	ASTM D638	psi	9,200	5,500	1,900	2,000	8,800	4,100
Tensile Elongation at break		%	4	24	102	77	8	80
Izod impact, notched	ASTM D256	ft. •lb./in.	0.53	0.92	12.50	3.50	0.52	0.95
Hardness		Shore D	83	78	56	65	80	78

Chemical Resistance ²

Distilled Water	%	0.21	0.28	0.44	0.38	0.25	0.25
5% Acetic Acid	%	0.25	1.1	2.8	1.7	1.3	0.78
50% Xylene/50% Isopropanol	%	8	14	35	22	9	20

¹ Determined on 1/8" thick castings at 25 °C. Systems were cured for 2 weeks at 25 °C.

² Percent weight gain after immersion for 24 hours at 25 °C.

Safety, Storage & Handling

Please refer to the MSDS for the most current Safety and Handling information.

Please refer to the Hexion web site for Shelf Life and recommended Storage information.

To preserve product quality and prevent discoloration, it is recommended that a nitrogen blanket be maintained on the headspace of an opened container and that storage / handling temperatures in excess of 50°C (122°F) be avoided. Spillage around the opening of the container from dispensing operations will form a crystalline residue. This residue is not soluble in the curing agent nor the resin, and certain measures should be taken to prevent it from contaminating the remaining contents of the container. The crystalline residue should be removed with a warm damp wash cloth PRIOR to re-opening the container for dispensing.

EPIKURE Curing Agent 3274 should be stored in tightly sealed, completely filled containers of metal, glass, or polyolefin plastic at normal room temperatures. The curing agent may darken during long-term storage, the extent of color formation depending on storage temperature and degree of exposure to air.

Exposure to these materials should be minimized and avoided, if feasible, through the observance of proper precautions, use of appropriate engineering controls and proper personal protective clothing and equipment, and adherence to proper handling procedures. **None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Material Safety Data Sheet (MSDS) for these and all other products being used are understood by all persons who will work with them.** Questions and requests for information on Hexion Inc. ("Hexion") products should be directed to your Hexion sales representative, or the nearest Hexion sales office. Information and MSDSs on non-Hexion products should be obtained from the respective manufacturer.

Packaging

Available in bulk and drum quantities.

Contact Information

For product prices, availability, or order placement, please contact customer service:

www.hexion.com/Contacts/

For literature and technical assistance, visit our website at: www.hexion.com

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