Technical Data Sheet

EPIKURE™ Curing Agent 3300

Product Description

EPIKURE™ Curing Agent 3300 is a very low viscosity, light colored cycloaliphatic amine curing agent for use in formulating heat cured epoxies. Isophorone diamine can be blended with other amine-based hardeners or with epoxy accelerators to achieve ambient curable epoxy compositions. As a sole curing agent, EPIKURE Curing Agent 3300 can yield epoxy systems with relatively high heat distortion properties when properly cured.

Application Areas/Suggested Uses

- Resistant to blush or “sweat-out”
- Low color
- Good physical properties
- Good chemical resistance

Benefits

- Laminates
- High build glaze, sealer or gel coat
- Light color castings
- Heat curable binders for textiles

Sales Specifications

Property	Value	Unit	Test Method
Amine Value as KOH	630 - 670	mg/g	ASTM D2896
Color	250 max.	Pt-Co	ASTM D1209
Purity	99.5 min.	% m/m	GC
Viscosity at 25°C	12 - 19	cP	ASTM D2196
Water	0.5 max.	% m/m	ASTM E1064

Typical Properties

Property	Value	Unit	Test Method
Density	7.7	lbs/gal	ASTM D1475
Equivalent Weight Approx.	43		

Performance Properties

Table 1 / Properties of EPON™ Resin 828, 161 or 862 with EPIKURE Curing Agent 3300				
Composition	Units	A	B	C
EPON™ Resin 828	pbw	100	–	–
EPON Resin 161	pbw	–	100	–
EPON Resin 862	pbw	–	–	100
EPIKURE Curing Agent 3300	pbw	22.7	24.4	24.8
Handling Properties @ 25°C				
Gel Time, 100 gram mass	min	128	110	115
Cure Schedule	min. / °F (°C)	90 / 180 (82) + 90 / 300 (150)	90 / 180 (82) + 90 / 300 (150)	90 / 180 (82) + 90 / 300 (150)
Cured State Properties				
Heat Deflection Temperature [1]	°C	146	133	117
Tg [2]	°C	148	154	134
Tensile Strength [3]	psi	11,710	11,400	11,032
Tensile Elongation	%	7.1	4.0	8.3
Tensile Modulus	ksi	400	450	450
Hardness [4]	Shore D	87	87	89
Weight loss [5], 24 hrs at 150°C	%	0.5	0.8	0.7
Chemical Resistance [6]				
Water	%	0.2	0.2	0.1

Composition	Units	A	B	C
5% Acetic Acid	%	0.2	0.2	0.1
50% Xylene / 25% Isopropanol	%	0.0	0.0	-0.1

[1] ASTM D648 (Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position).

[2] Tg ASTM D4065 (Dynamic Mechanical Properties of Plastics).

[3] ASTM D638 (Tensile Properties of Plastics).

[4] ASTM D2240 (Standard Test Method for Rubber Property-Durometer Hardness).

[5] Specimen size 1/8 in. x 1 in. x 3 in.

[6] Percent weight gain after immersion for 24 hours at 25 °C – specimen size 1/8 in. x 1in. x 3 in.

Table 2 / Properties of EPON Resin 8111 with EPIKURE Curing Agent 3300

Composition	Units	A	B
EPON Resin 8111	pbw	100	100
EPIKURE Curing Agent 3300	pbw	30.4	30.4
Handling Properties @ 25°C			
Gel Time, 100 gram mass	min	53	53
Cure Schedule		7 days at RT	1 day at RT + 2 hrs at 100°C
Cured State Properties			
Heat Deflection Temperature [1]	°C	---	---
Tg [2]	°C	55	100
Tensile Strength [3]	psi	8,685	8,975
Tensile Elongation	%	2.5	8.5
Tensile Modulus	ksi	520	470

Composition	Units	A	B
Hardness [4]			
1 day	Shore D	45	85
7 days	Shore D	83	---
Chemical Resistance [5]			
Water			
24 hours	%	0.1	0.1
7 days	%	0.3	0.4
28 days	%	2.2	0.7
Hardness, [4,5], 28 days	Durometer D	84	85
5% Acetic Acid			
24 hours	%	13.7	0.4
7 days	%	Destroyed	1.1
28 days	%	---	2.3
Hardness, [4,5], 28 days	Durometer D	---	84
50% Xylene / 25% Isopropanol			
24 hours	%	11.1	0.1
7 days	%	21.2	0.4
28 days	%	27.7	1.3
Hardness, [4,5], 28 days	Durometer D	44	84

[1] ASTM D648 (Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position).

[2] Tg ASTM D4065 (Dynamic Mechanical Properties of Plastics).

[3] ASTM D638 (Tensile Properties of Plastics).

[4] ASTM D2240 (Standard Test Method for Rubber Property – Durometer Hardness).

[5] Percent weight gain after immersion – specimen size 1/8 in. x 1 in. x 3 in.

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 the product quality and prevent product discoloration, it is recommended a nitrogen blanket be maintained on the head space of an opened or in-use container. Spillage around the opening of the container from dispensing operations will form a white crystalline residue. This residue is not soluble in the curing agent or the resin, and certain measures must be taken to prevent contamination of the remaining container contents. Remove all signs of crystalline residue by wiping with a warm damp wash cloth prior to opening the container for dispensing. Wear proper personal protection at all times.

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 atwww.hexion.com