

ANCAMINE® 2089M Curing Agent**DESCRIPTION**

Ancamine 2089M curing agent is a modified aliphatic amine for use as an ambient temperature curing agent for liquid epoxy resins. It imparts rapid development of properties at ambient and low temperatures with very good film appearance.

ADVANTAGES

- Rapid ambient and low temperature cure
- High-gloss blush-free films
- High reactivity
- Low viscosity

APPLICATIONS

- Solvent-free and high-solids coatings
- Crack injection
- Adhesives and concrete patching compounds
- Accelerator for amine-cured coatings and floorings

For additional information on chemical resistance, physical properties and use of Ancamine 2089M as an accelerating curing agent, refer to "Epoxy Curing Agents for Flooring Applications."

SHELF LIFE

At least 24 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 Ancamine 2089M curing agent.

TYPICAL CURE SCHEDULE

1–2 days at ambient temperature.

TABLE 1: TYPICAL PROPERTIES

Appearance	Pale, Yellow Liquid
Color (Gardner)	2
Viscosity @ 77°F (cP)	100
Specific Gravity @ 77°F	0.974
Amine Value (mg KOH/g)	395
Flash Point (closed cup) (°F)	266
Equivalent Wt/{H}	75
Recommended Use Level (phr, EEW=190)	40

TABLE 2: TYPICAL HANDLING PROPERTIES*

Mixed Viscosity @ 77°F (cP)	2,540
Gel Time (150g mix @ 77°F) (min)	15
Thin Film Set Time:	
@ 77°F (h)	2.0
@ 40°F (h)	5.0
Peak Exotherm (100g mix @ 77°F) (°F)	146
Peak Exotherm Time (min)	20

TABLE 3: TYPICAL PERFORMANCE*

(7 day cure @ 77°F)	
Compressive Strength (psi)	12,300
Compressive Modulus (thousand psi)	267
Tensile Strength (psi)	11,000
Tensile Modulus (thousand psi)	577
Tensile Elongation @ Break (%)	3.3
Flexural Strength (psi)	18,000
Flexural Modulus (thousand psi)	648
Heat Deflection Temperature (ASTM D648-264 psi) (°F)	133
Barcol Hardness (Model GYZJ-835)	81
Bond Strength (mild steel to mild steel) (psi)	940

* Ancamine 2089M curing agent formulated with standard Bisphenol-A based (DGEBA, EEW=190) epoxy resin.

ANCAMINE® 2089M Curing Agent**SUPPLEMENTARY DATA**

Ancamine 2089M as an accelerator for cycloaliphatic, aliphatic and amidoamine curing agents.

Ancamine 2089M P.B.W.	Ancamine 1618 P.B.W.	Ancamine 2021 P.B.W.	Ancamine 506 P.B.W.	Loading of Blend (phr)	150g mix Gel Time @ 77°F (min)	0.2mm films Set Time @ 77°F (h)
100	—	—	—	40	15	2
80	20	—	—	43	17	3
60	40	—	—	46	20	4
40	60	—	—	50	25	4.5
20	80	—	—	55	27	5.5
—	100	—	—	60	38	7.5
80	—	20	—	41	17	2.5
60	—	40	—	42	19	3.5
40	—	60	—	43	25	4.5
20	—	80	—	44	29	6
—	—	100	—	45	43	8.5
80	—	—	20	42	19	3
60	—	—	40	43	23	5
40	—	—	60	45	32	8
20	—	—	80	48	41	16
—	—	—	100	50	350	23

Footnotes:

- (1) EPON 828/DER 331 resin was used as standard liquid bisphenol-A epoxy.
- (2) Gel times were measured in air according to BS 2782.
- (3) Thin film set times were measured on a Beck—Koller drying tester.
- (4) Ancamine 1618 curing agent is a standard cycloaliphatic amine adduct curing agent.
- (5) Ancamine 2021 curing agent is a modified aliphatic amine adduct.
- (6) Ancamine 506 curing agent is a long pot life amidoamine.
- (7) All the above combinations with Ancamine 2089M yield high gloss films. This compares favorably with coatings derived from conventional fast-curing aliphatic amine (Ancamine 1768 curing agent) accelerated blends, which at levels in excess of 15 P.B.W. of Ancamine 1768 yield greasy films.

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