

OMICURE® U-24M

Micronized Urea Accelerator
2,4-Diamino toluene
CAS No. 17526-94-2

DESCRIPTION

OMICURE® U-24M, an aromatic substituted urea, is intended for use as a latent accelerator for the dicyandiamide cure of epoxy resins. The addition of OMICURE U-24M to epoxy/dicy formulations reduces the time and/or temperature required to cure these shelf-stable one-part products.

Compared to the other CVC Thermoset Specialties substituted ureas, toluene bis dimethyl urea provides the greatest degree of acceleration to epoxy/dicy formulations. OMICURE U-24M, at concentrations required to provide an equal degree of acceleration, will produce the least effect on cured properties. Suggested use levels of OMICURE U-24M are < 5 phr. Curing can be accomplished in about 50 minutes at 100 °C and in less than 3 minutes at temperatures ≥ 150°C. Cure times are dependent on the composition of the formulated product and your particular end application.

Room temperature shelf lives (time to double viscosity) of > 3 months can be obtained when < 1 phr OMICURE U-24M is used with DGEBA/dicy. Some of the factors that can effect shelf life are formulation ingredients and compounding parameters. Ingredients in which OMICURE U-24M is insoluble at processing and storage temperatures will enhance overall storage stability. OMICURE U-24M can be incorporated into your formulation concurrent with the dicy addition.

APPLICATIONS

As a latent accelerator in the dicyandiamide cure of epoxy resins used in:

- Adhesives
- Powder coatings
- Prepregs
- Encapsulation
- Reinforcements

TYPICAL PROPERTIES

Appearance	Off-white to white powder
Melting Point, °C	180 – 195
Moisture Content, max %	1.0
Particle size, min % smaller than 44 microns	95

PERFORMANCE DATA

Shelf Life and Tg of OMICURE U-24M Accelerated DGEBA/Dicy

Fomulation, pbw	A	B	C	D	E	F
DGEBA*	100	—————>				
OMICURE DDA-10 (dicyandiamide)	8	—————>				
Hydrophobic fumed silica	3	—————>				
OMICURE U-24M	0	1	3	5	-	-
Monuron	-	-	-	-	5	-
Diuron	-	-	-	-	-	5

Room Temperature Shelf Life	A	B	C	D	E	F
Time to double viscosity, weeks	> 70	13	10	9	16	24
Tg, °C**	140	134	127	117	115	115

*EEW: 182-192, 25 °C; Viscosity: 11,000-14,000 cps

**Determined on DSC second scan, first scan to 275 °C, 20 °C per minute

PACKAGING & AVAILABILITY

OMICURE U-24M comes in plastic-lined corrugated cardboard boxes (net weight 40 lb). Check with your sales representative for specific designations and particle size specifications.



HEALTH & SAFETY PRECAUTIONS

OMICURE U-24M is a fine powder classified as a nuisance dust. It is not a primary skin or eye irritant but will cause respiratory irritation with prolonged dust inhalation.

The use of engineering controls to keep the material confined or convey dust away from the breathing zone is the preferred method of handling. Alternatively, an approved dust respirator and impervious clothing should be worn if the material becomes airborne.

Refer to CVC Thermoset Specialties Safety Data Sheet on OMICURE U-24M for additional safety and health information. The SDS is revised as new data becomes available.

DISCLAIMER

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CVC Thermoset Specialties
844 North Lenola Road / Moorestown, NJ 08057
Phone: 856-533-3000 / Fax: 856-533-3003 / www.cvcthermoset.com



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