

# OMICURE® U-415M

Micronized Urea Accelerator  
Technical Grade  
Methylene Bis-(Phenyl Dimethyl Urea)  
CAS No. 10097-09-3

## DESCRIPTION

OMICURE® U-415M, an aromatic substituted urea, is intended for use as a latent accelerator for the dicyandiamide cure of epoxy resins. The addition of OMICURE U-415M to epoxy/dicy formulations produces shelf-stable one-part products that cure in shorter times and/or at lower temperatures.

Suggested use levels of OMICURE U-415M in DGEBA/dicy are 1 to 3 phr. At these levels, curing can be accomplished in about 80 minutes at 100 °C and in less than five minutes at temperatures  $\geq 150$  °C. Cure times and shelf lives are dependent on the composition of the formulated product and your particular end application. Some of the factors that can effect shelf life are formulation ingredients and compounding parameters. Ingredients in which OMICURE U-415M is insoluble at processing and storage temperatures will enhance overall storage stability. OMICURE U-415M 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	190 – 220
Moisture Content, max %	0.7
Particle size, min % smaller than 44 microns	95

### PERFORMANCE DATA

Shelf Life and Tg of OMICURE U-415M and Omicure U-52M Accelerated DGEBA/Dicy

Fomulation, pbw	A	B	C	D	E	F	G	H	I
DGEBA*	100	—————>							
OMICURE DDA-10 (dicyandiamide)	8	—————>							
Hydrophobic fumed silica	3	—————>							
OMICURE U-52M	0	1	3	5	-	-	-	-	-
OMICURE U-415M	-	-	-	-	1	3	5	-	-
Monuron	-	-	-	-	-	-	-	5	-
Diuron	-	-	-	-	-	-	-	-	5
Room Temperature Shelf Life	A	B	C	D	E	F	G	H	I
Time to double viscosity, weeks	> 70	57	56	52	42	20	17	16	24
Tg, °C**	140	133	127	119	130	128	125	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-415M comes in plastic-lined corrugated cardboard boxes (net weight 40 lb).



### HEALTH & SAFETY PRECAUTIONS

OMICURE U-415M 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.

Refer to CVC Thermoset Specialties Safety Data Sheet on OMICURE U-415M for safety and health information. The MSDS is revised as new data becomes available.

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