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jER CURE™

Curing agent for epoxy resins

Epoxy Unit
Sustainable Polymers Sector
Mitsubishi Chemical Corporation

Mercaptane

Grade	Specifications			Content (1) (phr)	Pot life (2) (min.)	Cure condition	Remarks / Applications
	Color (APHA)	Viscosity (mPa.s at 25°C)	Mercaptane eq. (g/eq)				
QX40	<200	400~550	125~137	70~80	7 (11)	23°C / 1hr	Low temp. curing agent Low viscosity, Use with tertiary amine / Adhesives

Modified Cycloaliphatic Amines

Grade	Specifications	Typical value		Content (1) (phr)	Pot life (2) (min.)	HDT (3) (°C)	Cure condition	Remarks / Applications
	Purity (%)	Color (Gardner)	Viscosity (mPa.s at 25°C)					
113	97.0~99.0	<1	125	32	300	152	80°C/1hr+ 150°C/3hr	High temp. curing agent Low viscosity, Heat & light stability / Potting, Laminating and CFRP

Modified Aromatic Amines

Grade	Specifications	Typical value		Content (1) (phr)	Pot life (2) (min.)	HDT (3) (°C)	Cure condition	Remarks / Applications
	Amine value (mgKOH/g)	Appearance	Viscosity (mPa.s at 25°C)					
WA	623~639	Transparent or slightly yellow liquid	165	25	900~ 1,200	160	100°C/2hr+ 175°C/4hr	High temp. curing agent Heat stability, Low viscosity, Low toxicity / Potting, Laminating and CFRP

Dicyandiamide

Grade	Specifications		Typical value		Content (1) (phr)	Cure condition	Remarks / Applications	
	Purity (%)	m.p. (°C)	Grain size / μm					Appearance
			50% Ave.	Max.				
DICY7	99.6~ 100.0	209.0~ 212.0	3	25	White fine powder	3~6	160°C/ 1~2hr	Latent curing agent Anti-blocking agent: 0.5wt% included / Powder coating, CFRP, Adhesives
DICY15			4	30				
DICY50			30~60	375				

Phenol

Grade	Specifications		Typical value		Cure condition	Remarks / Applications
	Phenol-OH (meq/g)	Viscosity (21) (Gardner- H at 25°C)	Appearance	Softening point (22) (°C)		
170	2.5~3.5	N~Q	White powder	90	150°C/15 min	High temp. curing agent Good reactivity, Flexibility, Use with tertiary amine / Powder coating

- 1) phr : per hundred resin / Feeding quantity (g) of Curing Agent for 100g of 828(WPE:190g/eq)
- 2) Pot Life : Mixing with 100g of 828 and stay it at 23°C
- 3) HDT (Heat Distortion Temperature) , Extension Modulus are Analyzed by cured products.
The test piece is made by standard cure condition as above.

11) Depends on the type of amine and quantity used, pot life varies greatly.

21) Analyzed by solution of Diethyleneglycolbutylacetate (Resin Content : 40%)

22) Softening point : Ring and ball method

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These products and the auxiliary materials normally combined with them are capable of producing adverse health effects ranging from minor skin irritation to serious effects. 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. **Each of these preventive measures depends upon responsible action by adequately informed persons. 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 Mitsubishi Chemical Corporation (MCC) products should be directed to MCC. Information and MSDSs on non-MCC products should be obtained from the respective manufacturer or vendor.

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