

AMICURE[®] UR2T

Curing Agent

DESCRIPTION

Amicure UR2T cure accelerator is a substituted urea-based accelerator [1,1'-(4 methy-m-phenylene)bis(3,3 dimethyl urea)] for dicyandiamide-cured epoxy resins. It combines excellent latency at ambient temperature with rapid cure in systems heated above its activation temperature.

Amicure UR2T cure accelerator is supplied as a micropulverized crystalline solid, which is easily dispersed into liquid epoxy resin.

TYPICAL PROPERTIES

Property	Value	Unit	Method
Appearance	Micronized White Powder		
Melting Point	182-190	°C	
Purity	97	%	
Volatiles	< 0.2	%	
Particle Size (90%)	< 10	µm	
Particle Size (50%)	< 7	µm	
Molecular Weight	272	g/mol	
Recommended Use Level	0.5-3	PHR	With Bisphenol A diglycidyl ether (EEW=190) and 4-8 PHR dicyandiamide

ADVANTAGES

- Rapid cure and property development
- High glass transition temperature
- Good one-pack shelf stability
- Good flow properties

APPLICATIONS

- One-pack paste and film adhesives
- Heat-cure composites
- Pre-preg composites

SHELF LIFE

At least 24 months from the date of manufacture in the original sealed container at ambient temperature.

STORAGE AND HANDLING

Refer to the Safety Data Sheet for Amicure UR2T curing Agent.

TYPICAL HANDLING PROPERTIES *

Property	Value	Unit	Method
Hot Plate Gel Time @ 135°C	5.7	min	
Hot Plate Gel Time @ 150°C	3.1	min	
Hot Plate Gel Time @ 177°C	1	min	
DSC Activation Temperature	141	°C	Heating rate 10°C/min
Typical cure schedule (I)	3h @ 135°C	s	
Typical cure schedule (II)	1h @ 150°C	days	

TYPICAL PERFORMANCE PROPERTIES *

Property	Value	Unit	Method
Lap Shear (15 min 135°C)	18.5	MPa	Aluminium coupons 25 x 100 (12.5mm overlap; 0.25 mm bondline)
Lap Shear (30 min 135°C)	20.1	MPa	Aluminium coupons 25 x 100 (12.5mm overlap; 0.25 mm bondline)
Lap Shear (10 min 135°C)	23.9	MPa	Aluminium coupons 25 x 100 (12.5mm overlap; 0.25 mm bondline)
Lap Shear (20 min 135°C)	21.2	MPa	Aluminium coupons 25 x 100 (12.5mm overlap; 0.25 mm bondline)
Lap Shear (10 min 135°C)	24.0	MPa	Aluminium coupons 25 x 100 (12.5mm overlap; 0.25 mm bondline)
Lap Shear (20 min 135°C)	22.4	MPa	Aluminium coupons 25 x 100 (12.5mm overlap; 0.25 mm bondline)
Glass Transition Temperature	118	°C	DSC second scan; heating rate 10°C/min

* 6 PHR Dicy plus 2 PHR Amicure UR2T

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