

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.

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 PROPERTIES

| | |
|---|-------------------------|
| Appearance | Micronized White Powder |
| Melting Point, [°C] | 182-190 |
| Purity, [%] | 97 |
| Volatiles, [%] | < 0.2 |
| Particle Size (90%), [µm] | < 10 |
| Particle Size (50%), [µm] | < 7 |
| Molecular Weight, [g/mol] | 272 |
| Recommended use Level¹, [PHR] | 0.5-3 |

TYPICAL HANDLING PROPERTIES²

| | |
|---|------------|
| Hot Plate Gel Time @ 135°C, [min] | 5.7 |
| @ 150°C, [min] | 3.1 |
| @ 177°C, [min] | 1 |
| DSC Activation Temperature³, [°C] | 141 |
| Typical cure schedule (I) | 3h @ 135°C |
| Typical cure schedule (II) | 1h @ 150°C |

TYPICAL PERFORMANCE PROPERTIES²

| | |
|---|------|
| Lap Shear (15 min 135°C)⁴, [MPa] | 18.5 |
| (30 min 135°C)⁴, [MPa] | 20.1 |
| Lap Shear (10 min 150°C)⁴, [MPa] | 23.9 |
| (20 min 150°C)⁴, [MPa] | 21.2 |
| Lap Shear (10 min 177°C)⁴, [MPa] | 24.0 |
| (20 min 177°C)⁴, [MPa] | 22.4 |
| Glass Transition Temperature⁵, [°C] | 118 |

Footnotes:

- (1) With Bisphenol A diglycidyl ether (EEW=190) and 4-8 PHR dicyandiamide
- (2) 6 PHR Dicy plus 2 PHR Amicure UR2T
- (3) Heating rate 10°C/min
- (4) Aluminium coupons 25 x 100 (12.5mm overlap; 0.25 mm bondline)
- (5) DSC second scan; heating rate 10°C/min

Epoxy Curing Agents and Modifiers

AMICURE® UR2T Curing Agent

EVONIK RESOURCE EFFICIENCY GMBH

Business Line Crosslinkers
Paul-Baumann-Straße 1
45764 Marl
Germany

apcsepx@evonik.com
www.evonik.com/crosslinkers

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