

AMICURE[®] UR

Curing Agent

DESCRIPTION

Amicure UR cure accelerator is a substituted urea-based accelerator (1 Phenyl 3,3 dimethyl urea) for dicyandiamidecured epoxy resins. It combines excellent latency at ambient temperature with rapid cure in systems heated above its activation temperature.

Amicure UR cure accelerator is supplied as a micropulverized crystalline solid which is easily dispersed into liquid epoxy resin. It is also available on a custom basis in different mean particle sizes with or without the addition of fumed silica as a free flow agent.

TYPICAL PROPERTIES

| Property | Value | Unit | |
|--------------------------------------|--|------|--|
| Appearance | White Powder | | |
| Melting Point | 130-133 | °C | |
| Assay | 97 | % | |
| Recommended Use Level (phr, EEW=190) | 0.5-3.0 parts with 4.0-8.0 parts dicyandiamide | | |
| Solubility in Water | < 0.5 | % | |

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
- Prepreg composites

STORAGE AND HANDLING

Refer to the Safety Data Sheet for Amicure UR curing agent.

SHELF LIFE

At least 24 months from the date of manufacture in the original sealed container at ambient temperature. Store away from excessive heat and humidity in tightly closed containers.

TYPICAL CURE SCHEDULE

45-60 minutes at 265°F (130°C).

TYPICAL PERFORMANCE

Formulation

| | | |
|--------------------|-------|-----------|
| Bis-A liquid resin | 100.0 | (EEW=190) |
| Amicure CG-1200 | 6.0 | |
| Amicure UR | 2.0 | |

Lap Shear Strength (psi)*

| Cure Temp. | Cure Time (min) | | | | | |
|---------------|-----------------|-------|-------|-------|-------|-------|
| | 5 | 10 | 15 | 20 | 30 | 40 |
| 275°F (135°C) | — | — | 2,892 | — | 3,053 | 3,164 |
| 300°F (150°C) | — | 3,090 | — | 3,156 | 3,360 | — |
| 320°F (177°C) | 3,177 | 3,685 | — | 4,495 | — | — |

* Lap points were prepared using chromic acid solution etched 2024-T3 1"x4" aluminum coupons with ½" overlap and 10 mils bond line thickness.

Amicure® is a registered trademark of Evonik Industries AG or one of its subsidiaries.

Disclaimer

This information and any recommendations, technical or otherwise, are presented in good faith and believed to be correct as of the date prepared. Recipients of this information and recommendations must make their own determination as to its suitability for their purposes. In no event shall Evonik assume liability for damages or losses of any kind or nature that result from the use of or reliance upon this information and recommendations. EVONIK EXPRESSLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES OF ANY KIND, WHETHER EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, NON-INFRINGEMENT, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE) WITH RESPECT TO ANY INFORMATION AND RECOMMENDATIONS PROVIDED. Reference to any trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used. Evonik reserves the right to make any changes to the information and/or recommendations at any time, without prior or subsequent notice.

EVONIK OPERATIONS GMBH

Business Line Crosslinkers
Paul-Baumann-Str. 1
45764 Marl
Germany

www.evonik.com/crosslinkers

Product Information: APCSE@evonik.com

Sample Request: APCSE@evonik.com

EVONIK CORPORATION

Business Line Crosslinkers
7001 Hamilton Boulevard
Trexlerstown, PA 18087
USA

CrosslinkersProinfo@evonik.com

Crosslinkers-Samples@evonik.com

**EVONIK SPECIALTY CHEMICALS
(SHANGHAI) CO., LTD.**

Business Line Crosslinkers
55, Chundong Road
Xinzhuang Industry Park
Shanghai, 201108
China

CL-Asiainfo@evonik.com

CL-Asiainfo@evonik.com

