

LINQBOND UF-3803

Flip Chip Epoxy Underfill



- High Degradation Temperature
- Low Viscosity and Fast Curing
- Low Modulus and Shrinkage

LINQBOND UF-3803 is a solvent-free, one-component epoxy underfill designed for demanding applications. It features a high degradation temperature, ensuring reliability under extreme conditions. The rapid curing process enhances production efficiency, while its formulation creates tough and durable structural bonds with excellent shear, peel, and impact strength. Additionally, its low shrinkage and low modulus properties effectively absorb stresses from thermal expansion and contraction, maintaining integrity and performance.

LINQBOND UF-3803 is designed for flip chip packaging. It also exhibits excellent manufacturability and can be used for various applications of electronic packaging such as casting, sealing, and encapsulation. It is RoHS compliant and halogen free.

Cure Schedule

- 150°C for 30 min
- Alternative Cure schedule:
 - 160°C for 10 min

Uncured Properties

Property	Value	Unit
Color	Black	–
Viscosity (25°C, 100 rpm)	7000 ± 2000	cPs
Pot Life @ 25°C	72	hours
Shelf Life @ -40°C to -5°C	8	months
Filler Content	60	%
Filler Size Range	2 - 10	µm

Instructions for Use:

1. Before use, thaw the product at room temperature for 2–3 hours. Ensure the syringe is placed vertically during thawing. Keep the container airtight until it reaches room temperature.
2. Ensure the surface to be bonded is clean and free of contaminants.
3. Cure time may vary based on the actual part geometry, material volume, and equipment. It is recommended to test on actual parts and equipment.
4. For large-scale applications, consider a staged curing process: start with a lower temperature precure, followed by a full cure at a higher temperature to effectively manage heat release.
5. Cool down gradually after curing to minimize thermal stress.
6. The epoxy cannot be refrozen once exposed to room temperature.

CAPLINQ Europe

Industrieweg 15E,
1566JN Assendelft
The Netherlands
Phone: +31 (20) 893 2224
Email: info@caplinq.com

CAPLINQ Corporation

80 Sirocco Crescent
Ottawa ON, K2S 2C9
Canada
Phone: +1 (613) 482-2215
Email: info@caplinq.com



CAPLINQ Americas

36927 Schoolcraft Rd
Livonia, MI 48150
United states
Phone: +1 (313) 558-8243
Email: info@caplinq.com

CAPLINQ Malaysia

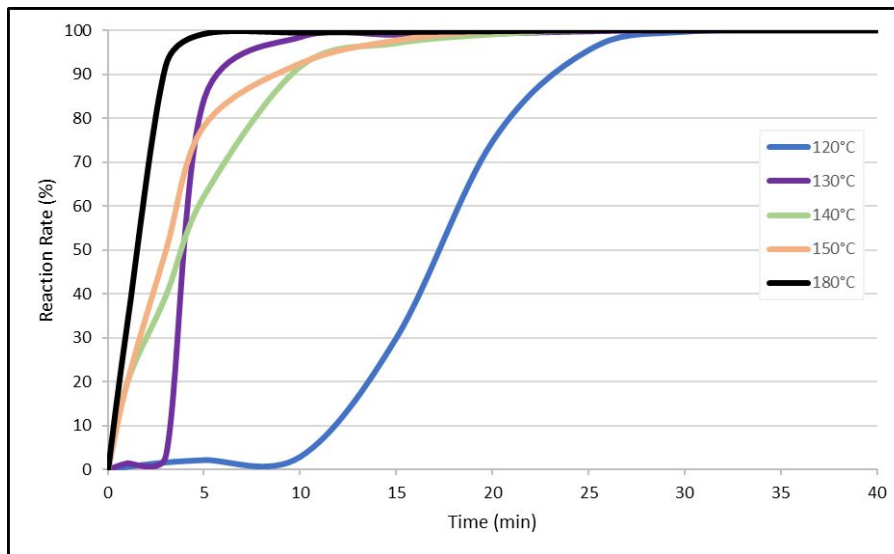
S-08-07 Persiaran Triangle
B Lepas, Penang 11900
Malaysia
Phone: +60(12)4302223
Email: info@caplinq.com

Cured Properties¹

Property	Value	Unit
Glass Transition Temperature, Tg (TMA)	80	°C
Coefficient of Thermal Expansion (CTE), α1	25	ppm/ °C
Coefficient of Thermal Expansion (CTE), α2	133	ppm/ °C
Water Absorption Ratio (97 °C /1.5 h)	0.82	%
Flexural Modulus	8	GPA
Durometer Hardness	85	Shore D
Degradation Temperature (TGA, 10 °C /min)	388	°C
Weight Loss Ratio @250°C	0.57	%
Weight Loss Ratio @300°C	0.97	%
Specific Gravity	1.68	–

¹ Above values were measured with material cure condition 150 °C for 30 min

Rate of reaction at different temperatures



Storage and Handling

Store and transport below -5°C Temperature. Keep away from moisture and heat sources. It is strictly not allowed to store in outdoor environments.

- Shelf life is 8 months when stored below -5°C temperature.

CAPLINQ Europe

Industrieweg 15E,
1566JN Assendelft
The Netherlands
Phone: +31 (20) 893 2224
Email: info@caplinq.com

CAPLINQ Corporation

80 Sirocco Crescent
Ottawa ON, K2S 2C9
Canada
Phone: +1 (613) 482-2215
Email: info@caplinq.com



CAPLINQ Americas

36927 Schoolcraft Rd
Livonia, MI 48150
United states
Phone: +1 (313) 558-8243
Email: info@caplinq.com

CAPLINQ Malaysia

S-08-07 Persiaran Triangle
B Lepas, Penang 11900
Malaysia
Phone: +60(12)4302223
Email: info@caplinq.com