

LINQBOND LE-4422



One part IC packaging adhesive

- Good thermal resistance
- Quick and efficient curing
- Outstanding electrical properties

LINQBOND LE-4422 is a one-part epoxy resin specifically developed for IC packaging. It is used in a wide range of electronic devices, including but not limited to electronic watches, calculators, game consoles, and e-books.

LINQBOND LE-4422 cures quickly and efficiently at high temperatures. Medium height (approximately 2.0 mm) can be achieved after curing. It has outstanding electrical properties, high peel strength, and excellent thermal resistance. It exhibits good adhesion strength to circuit boards, making it ideal for IC applications and providing excellent protection for aluminum wires.

Premixed properties

Property	Value	Unit
Appearance (Visual inspection)	Black	–
Viscosity at 25 °C (Brookfield DV)	35,000–60,000	cps
Gel Time at 150 °C	1–2	min

Cured properties

Property	Value	Unit
Volume resistivity	$>1.0 \times 10^{15}$	$\Omega \cdot \text{cm}$
Breakdown Voltage	>17	kV/mm
Specific Gravity at 25 °C	1.4–1.5	–
Coefficient of Thermal Expansion α_1/α_2	43/122	ppm/°C
Glass Transition Temperature (DSC)	128–137	°C
Glass Transition Temperature (TMA)	142	°C
Hardness	81±5	Shore D
Elastic Modulus	3974	MPa
Tensile Strength	>10	kg/mm ²
Compressive Strength	>10	kg/mm ²
Impact Strength	$>9.0 \times 10^{-3}$	kJ/m ²
Water absorption at 25 °C (After 24 hours of soaking)	<0.3	%

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Curing Conditions:

- Curing Temperature: 120–130 °C
- Curing Time: 90–120 min

These conditions serve as a reference only. Please establish the curing conditions based on the product's specific requirements.

Precautions:

1. This product needs to be stored at low temperatures and at dry places. The shelf life will vary depending on the storage conditions.
2. When the material is take out from refrigeration, thaw it first prior to use. Keep in an airtight container at room temperature. After thawing for at least 6 to 8 hours, open and then use.
3. Maintain a clean and ventilated workplace, using extraction trunks when necessary.
4. Wear appropriate protective equipment and minimize direct contact with the human body. Refer to the Material Safety Data Sheet (SDS) before use.

Please note that the provided information is based on available data and typical conditions. For specific applications and detailed test results, refer to the actual test data and conduct appropriate certifications.

Storage and Handling

Store in a ventilated, dry, and clean environment below 25 °C. Keep away from fire and heat sources. It is strictly forbidden to store in outdoor environments. Shelf life can be extended by using cold storage.

Shelf life at 25 °C	10	days
Shelf life at 10 °C	30	days
Shelf life at 5 °C	90 days	