

LINQBOND™ ED-490CM



Two-component epoxy-based adhesive

- Strong adhesion to various substrates
- Fast cure at room temperature
- Halogen-free (IEC 61249-2-21), UL94 V-0 rated, and complies with RoHS and regulations

LINQBOND™ ED-490CM is a two-component epoxy adhesive that cures rapidly even at low temperatures, reducing processing time and increasing production efficiency. This product is easy to handle and provides excellent adhesion to different substrates. **LINQBOND™ ED-490CM** exhibits high toughness, low thermal stress, and thermal shock resistance. Furthermore, it offers high electrical insulation under high humidity. Its hardener does not form an insoluble, whitish solid upon air exposure, and the cured surface avoids oiliness and poor gloss.

Overall, **LINQBOND™ ED-490CM** is an ideal solution for structural electronic encapsulation and bonding. It can be used for applications from -40 to 100°C. Additionally, it is RoHS 2011/65/EU compliant, halogen-free according to IEC 61249-2-21 standards, and meets various environmental testing requirements.

Uncured Properties

Property	Part A	Part B	Unit
Appearance	Liquid, Black	Liquid, Cream	–
Viscosity (25 °C) Spindle 14, 10 rpm	50,000–100,000	30,000–50,000	cps
Mixed viscosity (25 °C) Spindle 14, 20 rpm	32000		cps
Thixotropic Index	≥ 1.9	≥ 3.5	–
Specific Gravity	1.57	1.37	–

Recommended Curing Conditions

Property	Value	Unit
Mixing Ratio (A:B)	2:1	by weight
Pot Life (25 °C)	6	h
Surface Drying Time (25 °C)	24	h
Through Cure Time at 25 °C at 80 °C	5–7 60	day min

Instructions for Use

1. Weigh the correct proportions and mix thoroughly, scraping both the bottom and the sides of the mixing container until a homogeneous mixture is obtained.
2. Ensure bonding surfaces are clean, dry, and properly prepared.

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3. Use mixed product before pot life for optimum properties. Avoid large quantity mixing. Apply adhesive evenly to both surfaces for maximum bond strength.
4. Cure time depends on part geometry, materials, bond line thickness, and oven efficiency. Confirm cure schedule with production parts and equipment.

Cured Properties

Property	Value	Unit
Specific Gravity	1.57	–
Glass Transition Temperature (DSC)	88	°C
Coefficient of Thermal Expansion (CTE), CTE α_1 CTE α_2	26 174	ppm/°C
Hardness	86	Shore D
Elongation at Break	5.0	%
Surface Resistivity	5×10^{14}	Ω
Volume Resistivity	5×10^{15}	$\Omega \cdot \text{cm}$
Dielectric Constant (100 Hz)	4.1	–
Water Absorption Ratio at 25 °C, 24 h at 80 °C, 24 h	0.85 6.92	%
Weight Loss Ratio at 100 °C at 150 °C at 200 °C	0 0.3 0.7	%

Caution for Use

While the risk of carcinogenicity from skin contact is considered low, mild skin redness may occur. In the event of skin contact, immediately wash thoroughly with soap and water, avoid the use of solvents. Ingestion of this product is moderately toxic and requires immediate medical attention. If the product is accidentally swallowed, do not induce vomiting unless directed by medical personnel. In case of eye contact, immediately flush the affected eye(s) thoroughly with clean water for a minimum of 15 minutes and seek medical attention promptly. For comprehensive safety information, please consult the Material Safety Data Sheet (MSDS).

Storage and Handling

Store the container in a cool, dark place, away from direct sunlight. Exposure to sunlight may cause the resin and hardener to yellow. Shelf life when stored at room temperature between 14 and 34 °C is 365 days (12 months). Keep the container sealed and prevent moisture contamination when not in use. This product contains amine, ensure to replace the lid immediately after each use.

