

LINQSOL EMC-G374

Black epoxy molding compound



- Ultra-high glass transition temperature ($T_g = 272\text{ °C}$)
- Designed for high-power SiC and GaN devices
- High degradation temperature, and excellent thermal stability

LINQSOL EMC-G374 is a green epoxy molding compound specifically developed for high-voltage and high-power SiC and GaN devices. It offers low modulus to meeting low-stress requirements. With extra high glass transition temperature ($T_g = 272\text{ °C}$), minimal ionic content, a high degradation temperature (460 °C), and a UL 94 V-0 flammability rating, **EMC-G374** guarantees strong performance and outstanding reliability. Overall, **LINQSOL EMC-G374** seamlessly integrates advanced material properties, safety compliance, and superior performance, precisely meeting the stringent demands of high-power semiconductor applications.

Cured properties

Property	Value	Unit
General Properties		
Color	Black	–
Filler content	82	%
Specific gravity	1.92	–
Spiral flow at 175 °C	100	cm
Viscosity at 175 °C	42,000	cP
Chemical Properties		
Ion content concentration $Cl^- / Na^+ / SO_4^{2-}$	$\leq 2.1 / \leq 1.3 / < 1.0$	ppm
Moisture absorption (PCT, 96 hours)	0.8	%
pH of extract	5–7	–
Electrical conductivity of extract	11.8	$\mu S \cdot cm^{-1}$
Thermal Properties		
Glass transition temperature	272	$^{\circ}C$
Coefficient of thermal expansion, α_1	12	ppm/ $^{\circ}C$
Coefficient of thermal expansion, α_2	52	ppm/ $^{\circ}C$
Gel time at 175 °C	28	s
Mold shrinkage	0.12	%
Flammability rating	V–0	UL 94
Degradation Temperature	460	$^{\circ}C$

The technical information presented in this document is provided for reference only and does not constitute a guarantee of specific properties or performance. Actual results may vary depending on individual conditions and application methods. Users are strongly advised to perform their own testing and validation to determine suitability for their intended use and compliance with relevant regulations.

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Electrical Properties

Volume resistivity	6.0×10^{16}	$\Omega \cdot \text{cm}$
Dissipation factor	0.0013	–
Dielectric constant	3.512	–

Mechanical Properties

Flexural strength at 25 °C / 260 °C	144/48	MPa
Flexural modulus at 25 °C / 260 °C	21/9.5	GPa
Storage modulus at 25°C/150°C/260°C	17.5/10.5/3.1	GPa
Adhesion Strength after PMC (Ag/Ni)	5.7/3.24	MPa

Recommended mold parameters

Parameter	Value	Unit
Molding temperature	175–190	°C
Transfer pressure	20–100	kg_f/cm^2
Transfer time	5–30	sec
Cure time at 175°C	2.5–4	min
Post mold cure time	2 hours at 175 °C + 4 hours at 240°C	–

The curing conditions provided are recommended guidelines based on typical laboratory results. Actual curing parameters should be defined and validated by the user to ensure compatibility with specific materials, part geometries, and end-use requirements. It is the user's responsibility to optimize and confirm curing conditions that meet their performance and quality standards.

Processing Instructions

- Before use, let **LINQSOL EMC-G374** reach room temperature for 24 hours. Keep the bag unopened and stored in a dry location with a relative humidity of $\leq 50\%$ during thawing to prevent moisture contamination.
- Use the materials within 72 hours after removing the container from cold storage.

Storage and Handling

LINQSOL EMC-G374 is available in pressed pellets in a wide range of sizes to meet specific customer needs. To ensure product integrity, keep it away from oxidizing materials. For long-term storage, maintain a cold environment. The shelf life below 5 °C is 183 days.

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