

LINQSOL EMC-7560

Black epoxy molding compound



- Designed for high-voltage and high-power discrete packages
- Halogen-free molding compound with high T_g , low CTE, and low modulus
- Excellent reliability for SiC devices

LINQSOL EMC-7560, a halogen-free epoxy molding compound for high-voltage and high-temperature semiconductor devices, offers a high glass transition temperature ($T_g = 205\text{ °C}$), low coefficient of thermal expansion (CTE), and modulus for robust performance. With low moisture absorption, minimal mold shrinkage ($<0.1\%$), high comparative tracking index (CTI = 600 V), and a UL 94 V-0 flammability rating, EMC-7560 adheres to stringent safety standards for high-power applications. Developed for TO220, TO247, and other surface mount devices, EMC-7560 allows SiC power modules to pass and perform well in H(3)TRB, HTGB, and HTOL tests. Its innovative epoxy system, incorporating a high-density molecule matrix, minimizes ion diffusion, ensuring superior reliability in challenging conditions. Overall, **LINQSOL EMC-7560** combines advanced material properties, safety compliance, and superior performance to meet the demands of high-power semiconductor applications.

Cured properties

Property	Value	Unit
General Properties		
Color	Black	–
Filler content	85	%
Filler sieved size	75	μm
Filler type	Spherical	–
Specific gravity	1.95	–
Spiral flow at 175 °C	82	cm
Chemical Properties		
Ion content		
Chloride (Cl^-) concentration	10	ppm
Sodium (Na^+) concentration	10	ppm
Mold shrinkage	0.1	%
Moisture absorption (PCT, 72 hours)	0.4	%
Mechanical Properties		
Flexural strength at 25 °C	135	MPa
Flexural modulus at 25 °C	17	GPa
Hot hardness at 175 °C	85	Shore D

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Electrical Properties

Volume resistivity at 180 °C after PCT, 72 h at 220 °C after PCT, 72 h	2.2×10^{14} 2×10^{14}	$\Omega \cdot \text{cm}$ $\Omega \cdot \text{cm}$
Comparative tracking index	600	V
Thermal Properties		
Glass transition temperature by TMA	205	°C
Coefficient of thermal expansion, α_1	10	ppm/K
Coefficient of thermal expansion, α_2	52	ppm/K
Gel time at 175 °C	30	s
Thermal conductivity	0.9	W/m · K
UL-94 rating	V-0	–

The data was obtained using samples cured at 175 °C for 120 seconds and then post-mold cured at 175 °C for 5 hours.

Recommended mold parameters

Parameter	Value	Unit
Molding temperature	175	°C
Cure time at 175 °C	2	min
Post mold cure time at 150–175 °C	5	h

Processing Instructions

- Before use, allow **LINQSOL EMC-7560** to reach room temperature for a minimum of 8 hours, ensuring the bag remains unopened to prevent moisture contamination.
- Prior to molding with **EMC-7560** or any new material, the mold should be cleaned thoroughly. For proper mold conditioning, the initial three shots should be cured for 5–10 minutes. After this initial conditioning period, you can reduce the curing time to a level that provides sufficient hot hardness for effective release.

Storage and Handling

LINQSOL EMC-7560 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 at 5 °C is 183 days.

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.

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