

LINQSOL™ EMC-1533

Black epoxy molding compound



- Green molding compound
- Designed for transistor outline (TO) and double decawatt (D²PAK) packages
- Excellent workability, low water absorption, low modulus, and excellent thermal stability

LINQSOL™ EMC-1533 is a halogen-free epoxy molding compound tailored for transistor Outline (TO) and D²PAK devices. Its low modulus minimizes package stress while maintaining a high glass-transition temperature of 170 °C for thermal stability. Its excellent flow characteristics enable smooth transfer molding. The compound also meets UL 94 V-0 flammability, ensuring robust safety margins.

LINQSOL™ EMC-1533 guarantees strong performance and outstanding long-term reliability in demanding environments. This product is deliberately formulated without the inclusion of substances prohibited by the European Union RoHS and REACH. Overall, **LINQSOL™ EMC-1533** seamlessly integrates advanced material properties, safety compliance, and superior performance to deliver a reliable solution for semiconductor device encapsulation.

Specifications

Property	Value	Unit
General Properties		
Color	Black	–
Filler sieving size	75	µm
Filler content	80	%
Specific gravity	1.90	–
Spiral flow at 175 °C	68	cm
Chemical Properties		
Ion content		
Chloride (Cl ⁻) concentration	10	ppm
Sodium (Na ⁺) concentration	8	ppm
Moisture absorption (PCT, 24 hours)	0.4	%
pH of extract	5.7	–
Electrical conductivity of extract	30	µS/cm
Thermal Properties		
Glass transition temperature	170	°C
Coefficient of thermal expansion, α1	15	ppm/°C
Coefficient of thermal expansion, α2	60	ppm/°C
Gel time at 175 °C	20	s
Flammability rating	V-0	UL 94

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Electrical Properties

Volume resistivity at 25 °C, 500 V	7.5×10^{16}	$\Omega \cdot \text{cm}$
Dielectric strength Alternating current	15	kV/mm
Direct current	35	kV/mm

Mechanical Properties

Flexural strength at 25 °C	125	MPa
Flexural modulus at 25 °C	17	GPa
Mold shrinkage	0.33	%
Adhesion to Cu	10	MPa

Recommended mold parameters

Parameter	Value	Unit
Molding temperature	170–190	°C
Transfer pressure	40–90	kg _f /cm ²
Transfer time	7–18	sec
Cure time at 175 °C	1.5–2	min
Post mold cure time at 175 °C	6–12	h
Post mold cure time at 190 °C	4–6	h

To achieve the best results, test the recommended conditions on the mold. Users should conduct their own testing to ensure it meets their specific needs and application.

Processing Instructions

- Before use, let **LINQSOL EMC-1533** 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-1533 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.

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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