

LINQSOL EMC-6043

Black epoxy molding compound



- High Spiral Flow
- Designed for SOT and Modules
- Low Stress and Low Moisture Absorption

LINQSOL EMC-6043 is a green epoxy molding compound developed for the encapsulation of power discrete semiconductor packages, including small outline transistor and modules. It offers high spiral flow to meet stringent moldability requirements. With high glass transition temperature ($T_g = 140\text{ }^{\circ}\text{C}$), low moisture absorption and low stress formulation, and a UL 94 V-0 flammability rating, **EMC-6043** guarantees strong performance and outstanding reliability.

Overall, **LINQSOL EMC-6043** seamlessly integrates advanced material properties, safety compliance, and superior performance, precisely meeting the requirements of discrete power semiconductor applications.

Cured properties

Property	Value	Unit
General Properties		
Color	Black	–
Filler content	85	%
Filler cut size	75	μm
Specific gravity	1.97	–
Spiral flow at $175\text{ }^{\circ}\text{C}$	140	cm
Chemical Properties		
Ion content		
Chloride (Cl^-) concentration	7	ppm
Sodium (Na^+) concentration	9	ppm
Moisture absorption (PCT, 24 hours)	0.18	%
pH of extract	6.5	–
Electrical conductivity of extract	27	$\mu\text{S} \cdot \text{cm}^{-1}$
Thermal Properties		
Glass transition temperature	140	$^{\circ}\text{C}$
Coefficient of thermal expansion, α_1	11	ppm/K
Coefficient of thermal expansion, α_2	42	ppm/K
Gel time at $175\text{ }^{\circ}\text{C}$	34	s
UL-94 rating	V-0	–

Europe

Industrieweg 15E,
1566JN Assendelft
The Netherlands
Phone: +31 (20) 893 2224
Email: info@caplinq.com

Canada

80 Sirocco Crescent
Ottawa ON, K2S 2C9
Canada
Phone: +1 (613) 482-2215
Email: info@caplinq.com



North America

36927 Schoolcraft Rd
Livonia, MI 48150
United states
Phone: +1 (313) 558-8243
Email: info@caplinq.com

South East Asia

S-08-07 Persiaran Triangle
B Lepas, Penang 11900
Malaysia
Phone: +60(12)4302223
Email: info@caplinq.com

Mechanical Properties

Flexural strength	145	MPa
Flexural modulus	19	GPa
Storage modulus at RT	19089	MPa
Storage modulus at 175°C	2310	MPa
Storage modulus at 260°C	1738	MPa
Hot hardness	82	Shore D

The technical data presented above is intended for reference purposes only. Actual performance may vary based on specific applications and conditions. Users are advised to conduct their own testing and evaluation to ensure compatibility with their specific requirements.

Recommended mold parameters

Parameter	Value	Unit
Molding temperature	170–180	°C
Transfer pressure	40–90	kgf/cm ²
Transfer time	10–25	s
Cure time at 175 °C	1.5–2	min
Post mold cure time at 175 °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-6043** 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-6043 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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