# LINQSOL **EMC-7142** Black epoxy molding compound



- Green epoxy molding compound
- Designed for small outline packages (SOP) and quad flat packages (QFP)
- Low water absorption, low stress, and excellent moldability

**LINQSOL EMC-7142** is a green epoxy molding compound specifically developed for the encapsulation of small outline packages (SOP) and quad flat packages (QFP). Its long spiral flow at 175 °C satisfies the required standards for SOP and QFP molding. **LINQSOL EMC-7142** has low modulus that meets low-stress requirements. Additionally, with a UL 94 V-0 flammability rating and low water absorption, **EMC-7142** guarantees strong performance and outstanding reliability. This product is deliberately formulated without the inclusion of substances prohibited by the European Union RoHS and REACH. Overall, **LINQSOL EMC-7142** seamlessly integrates advanced material properties, safety compliance, and superior performance to deliver a reliable solution for semiconductor device encapsulation.

# **Cured properties**

| Property   | Value      | Unit                |
|--|------------|---------------------|
| General Properties   |            |                     |
| Color  | Black      | -                   |
| Filler cut size  | 75         | μm                  |
| Specific gravity   | 2.00       | -                   |
| Spiral flow at 175 °C  | 90         | cm                  |
| Chemical Properties  |            |                     |
| lon content<br>Chloride (Cl <sup>-</sup> ) concentration<br>Sodium (Na⁺) concentration | <15<br><15 | ppm<br>ppm          |
| Moisture absorption at boiling   | 0.18       | %                   |
| pH of extract  | 6.5        | -                   |
| Electrical conductivity of extract   | 18         | µS·cm <sup>−1</sup> |
| Mold shrinkage   | 0.17       | %                   |
| Mechanical Properties  |            |                     |
| Flexural strength  | 160        | MPa                 |
| Flexural modulus   | 24.8       | GPa                 |
| Thermal Properties   |            |                     |
| Glass transition temperature   | 122        | °C                  |
| Coefficient of thermal expansion, $\alpha 1$   | 8          | ppm/K               |

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| Coefficient of thermal expansion, $\alpha 2$ | 34  | ppm/K |  |  |
|--|-----|-------|--|--|
| Gel time at 175 °C                           | 0.5 | min   |  |  |
| Flammability                                 | V-0 | UL-94 |  |  |
| Electrical Properties                        |     |       |  |  |
| Comparative tracking index                   | 600 | V     |  |  |

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   | kg/cm <sup>3</sup> |
| Transfer time                 | 10-25   | sec                |
| 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-7142** reach room temperature for 24 hours. Keep the bag unopened and stored in a dry location with a relative humidity of ≤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-7142** 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 when stored below 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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