

# OPTOLINQ OLS-1557



## Two part optically clear epoxy resin

- Low viscosity
- Good workability
- Good adhesion

**OPTOLINQ OLS-1557** is an optically clear, two-part, and heat-curable epoxy resin. OLS-1557 AB mixture has low viscosity and good workability after mixing. When fully cured, the product demonstrates minimal mold shrinkage, high toughness, high-temperature resistance, good adhesion on different surfaces, and excellent electrical properties, making OLS-1557 an ideal material for the encapsulation of optoelectronic devices.

### Premixed properties

| Property           | Part A                      | Part B                      |
|--------------------|-----------------------------|-----------------------------|
| Appearance         | Light purple viscous liquid | Transparent liquid          |
| Viscosity at 25 °C | 3150–5850 cP                | 450–850 cP                  |
| Density            | 1.10–1.20 g/cm <sup>3</sup> | 1.00–1.10 g/cm <sup>3</sup> |
| Shelf life         | 183 days                    | 93 days                     |

### Mixed properties

| Property               | Value   | Unit |
|------------------------|---------|------|
| Mixing ratio by weight | 100:100 | -    |
| Pot Life               | 4       | h    |

### Cured properties

| Property                                      | Value | Unit   |
|---|-------|--------|
| Water absorption                              | <0.3  | %      |
| Coefficient of thermal expansion <sup>1</sup> | 40    | ppm/°C |
| Glass transition temperature <sup>2</sup>     | 81–91 | °C     |

<sup>1</sup> Cylindrical test sample (diameter = 5 mm, height = 10 mm) was cured at 80 °C for 2 h. Data reflects the value of CTE from 50 to 100 °C. Addition of diffusion and color pastes may affect the CTE.

<sup>2</sup> Standard block test sample was cured at 120 °C for 1 h, and then at 135 °C for 8 h. Addition of diffusion and color pastes may affect the T<sub>g</sub>.

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### Processing Instructions:

- Mix component A and B, stir uniformly, and degas under vacuum.
- Recommended molding curing conditions: Mold at 150 °C for 5 minutes and post-mold cure at 130–135 °C for 6–8 hours. Identify the specific curing settings based on your product requirements.

### Precautions:

1. Utilize the mixture promptly after mixing components A and B to avoid excessive viscosity.
2. While dispensing and curing, avoid highly humid conditions.
3. Avoid skin and eye contact. In case of contact, rinse thoroughly with soap (for skin) or clean water (for eyes), and seek medical attention if needed.
4. Maintain a clean and ventilated workplace, using extraction trunks when necessary.
5. Wear appropriate protective equipment and minimize direct contact with the human body. Refer to the Material Safety Data Sheet (SDS) before use.

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.

### Storage and Handling

Store in a ventilated, dry, and clean environment below 30 °C and 70% RH. Keep away from fire and heat sources. It is strictly forbidden to store in outdoor environments. At proper storage conditions, Part A has a shelf life of 6 months and Part B a shelf life of 3 months. Shelf life can be extended by using cold storage.

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