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KEMIA CHEM CO., LIMITED.

High temperature resistant Encapsulant 8188A/B

1 . Feature

8188A/B is a two components transparent liquid thermoset alicyclic epoxy resins which is developed for high power LED fluorescence glue. It has excellent yellowing resistance, UV resistance and long time life at 200 °C.

2 . Typical Properties Before Curing

| Item | Unit | Resin 8188A | Hardener 8188B |
|-----------------|-------------------|-----------------------|----------------|
| Component | | Alicyclic Epoxy Resin | Acid Anhydride |
| Color | | Transparent | Transpatent |
| Mixture Ratio | wt | 100 | 100 |
| Density (25℃) | g/cm ³ | 1.16 | 1.18 |
| | | 1.17 (mixture) | |
| Viscosity (25℃) | mPa · S | 2000 ± 500 | 80 ± 20 |
| | | 400 ± 50 (mixture) | |
| Gel Time (120℃) | minute | 8 ± 3 | |

PS: The above are representative of values, not specification value

3. Recommended IFU (Clean containers and tools before use. Introduction of foreign matter may affect performance of Encapsulant)

| Step | Action | Caution |
|-------------------------------|--|---|
| 1. preheating of resin | Clean the container before use, 100 aliquots of 8188A is preheated at 80℃ for 40min. | Make sure container is clean |
| 2. Mixing | 100 aliquots of 8188B is added into 8188A, which is already preheated. Mix well with mixing propeller at 200rpm for 10-20 min. | A: B=100:100 (w/w) make sure proper mixing |



| | | |
|---------------------|--|--|
| 3. Defoaming | Vacuum machine with vacuum degree at -0.1MPa is used for 2-10min until bubbles are completely removed. | Make sure there is no bubble left |
| 4. Molding | Pour the mixture resin into the required mould | Make sure there is no other foreign matter within the mould |
| 5. Roast | Keep mould in the oven at 120°C for 1h | Make sure there is no other resin in the oven. Timing begins after oven temperature reaches 120 °C |

Notes: the mixture should be used within 10h after mixing. Viscosity would rise over time, which will influence performance. Call technical service if you have any questions.

4. Typical Properties After Curing

| Item | | Unit | Value | Remarks |
|-----------------------------------|------------------|-------------------|-------------|----------------|
| Recommended Curing Conditions | | 120°C *1h | | |
| Glass Transition(T _g) | | °C | 158 | TMA |
| CTE | < T _g | ppm/°C | 65 | 40°C ~80°C |
| | > T _g | | 168 | 190°C ~210°C |
| Flexural Strength | | N/mm ² | 95 | GB/T 2567-2008 |
| Flexural Modulus | | N/mm ² | 3000 | GB/T 2567-2008 |
| Hardness(Shore D) | | | > 85 | Shore D |
| Refractive Index | | | 1.50 ± 0.01 | Abbe |
| Water Absorption | | Wt% | 0.3 | 100°C /1hr |

PS: The above are representative of values, not specification value

5. Packaging

8188A:1.0kg Fluoride Drum

8188B:1.0kg Fluoride Drum

6. Shelf Life

6 months under room temperature.

7.Safety

8188A may cause injury to skin following prolonged or repeated contact. Prevent prolonged or frequent contact. if contact occurs, wash at first opportunity with soap and water.

8188B may cause skin sensitization or other allergic responses. Avoid inhalation of vapor. Prevent all skin contact. If contact occurs, immediately with soap and water.

If you need to know about Safety and operating method of the detailed content, please refer to the MSDS (Material Safety Data Sheet).