OPTOLINQ **TC-8090**

Optically clear epoxy molding compound

- High reliability backlight LED
- Moisture resistant
- Low blue ray decay

OPTOLINQ TC-8090 is a high-performance optical epoxy specifically developed for white decorative and high reliability backlight LED encapsulation, just like TC8030 and TC8060. This mono-component epoxy achieves superior adhesion performance and great transmittance. It is an anti moisture formulation that is stable at high temperatures combining good package performance and long life.

OPTOLINQ TC-8090 is able to offer low blue-ray decay for outdoor LED applications and overall great light performance with >90% transmittance at 450 nm. It is a highly reliable product that passes reflow thermal cycling test at 85°C @85% relative humidity and its light decline is <10% in RT/5mA @1000hrs.

Cured properties

Property	Value	Unit
Specific gravity	1.28	–
Hardness	86	Shore D
Gel time at 160 °C	20-40	s
Spiral flow at 160 °C	200±50	cm
Glass transition temperature by DSC	140	°C
Coefficient of thermal expansion, α1	74	ppm/K
Coefficient of thermal expansion, α2	200	ppm/K
Flexural strength	140	MPa
Flexural modulus	3.6	GPa
Transmittance at 450 nm	>90	%
Refractive Index at 598 nm	1.53	-

Recommended mold parameters

Parameter	Value	Unit
Preheating temperature	40-80	°C
Molding temperature	150±10	°C
Transfer pressure	0.98-3.92	MPa

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Recommended mold parameters

Parameter	Value	Unit
Transfer time	35±15	s
Cure time	180-300	s
Post mold cure time at 150 °C	4 - 6	h

Processing Instructions

- Be sure to keep the product dry as moisture can lead to curing failures or affect the electrical integrity of compounds.
- Before use, thaw **OPTOLINQ TC-8090** for 16–24 hours at 20–25 °C with the package sealed until product reaches room temperature. Keep the packaging unopened to prevent moisture contamination.
- Products must be used up within 24 hours after thawing.

Packaging Instructions

- Keep the molding compound sealed with aluminum laminated bags, in quantity of 1 kg each bag and 10 kg each box.

Storage and Handling

To ensure the integrity of **OPTOLINQ TC-8090**, store and use the products by following the recommended conditions. Keep it away from heat sources like molding dies and lead-frame preheating panels, as prolonged heat exposure can lead to the degradation of the molding compound. Keep the product at 5°C or lower for storage and transport. Under proper conditions, the shelf life of the product is 6 months from the manufacturing date.

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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