OPTOLINQ™ TMC-3282SF

Optically clear epoxy molding compound

- Excellent moldability with long spiral flow
- Reliable performance in high temperature and high humidity conditions
- High adhesion strength and low stress

OPTOLINQ™ TMC-3282SF is an optically clear epoxy molding compound specifically designed for the encapsulation of automotive optoelectronic components. With its large spiral flow, it ensures precise and intricate molding. **TMC-3282SF** exhibits a high glass transition temperature, maintaining performance in high temperature and humidity conditions. Overall, the superior moldability and reliability of **OPTOLINQ™ TMC-3282SF** ensure precision and quality in optoelectronic device molding.

Cured properties[1]

Property	Value	Unit
Specific gravity	1.24±3	–
Hardness at 25 °C	>80	Shore D
Gel time at 150 °C	47.5±12.5	s
Spiral flow at 150 °C	100–240	cm
Mold shrinkage	<1.5	%
Glass transition temperature by TMA	165	°C
Coefficient of thermal expansion, α1	62	ppm/K
Coefficient of thermal expansion, α2	183	ppm/K
Flexural strength	>130	MPa
Flexural modulus	3.7±0.3	GPa
Transmittance at 400 nm[2]	>85	%

[1] Samples were cured using the following parameters. In mold cure: 4 min at 150 °C, Post-mold cure: 4 h at 150 °C
[2] Sample thickness is 1 mm.

Recommended mold parameters

Parameter	Value	Unit
Preheat temperature	85±10	°C
Molding temperature	160–175	°C
Molding pressure	3–8	MPa
Transfer time at 150 °C	70±25	s
Cure time at 150 °C	2.5–4	min
Post mold cure time at 165 °C	4	h

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Processing Instructions

- Before use, allow **TMC-3282SF** to reach room temperature (15–25 °C, 25–55% RH) for a minimum of 24 hours and 12 hours for small pellets, ensuring the bag remains unopened to prevent moisture contamination.
- For **TMC-3282SF**, preheating can be performed using standard RF equipment. Preheating must be done slowly to achieve uniform temperature.
- Apply an outer releasing agent, such as silicones or fluorinated compounds, to the mold surface to facilitate easy release from the mold dies. Different curing conditions should be used depending on the mold design package, kind, and device type.
- Prior to molding with **TMC-3282SF** or any new material, the mold should be cleaned thoroughly. To prepare the mold, the initial three shots should be cured for 5–10 minutes. After this initial preparation period, you can reduce the curing time to a level that provides sufficient hot hardness for effective release.

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

OPTOLINQ TMC-3282SF 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, ideally at –10 °C or lower. The shelf life under this condition is 6 months.

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