

OPTOLINQ™ WMC-G279

White epoxy molding compound



- White transmitting molding compound
- Designed for photo-coupler, optical isolator, or opto-isolator devices
- Excellent mechanical integrity

OPTOLINQ™ WMC-G279 is a halogen-free, white-transmitting epoxy molding compound specifically designed for use in optocouplers, also known as photo-couplers, optical isolators, or opto-isolators. It offers good flowability (85 cm spiral flow at 175 °C), fast molding cycle (22 s gel time), and a high glass-transition temperature of 180 °C for reflow and thermal cycling stability. With 45% transmittance at 940 nm and low water absorption (0.5%, PCT 24 h), WMC-G279 supports consistent optical coupling while controlling moisture-induced stress. The compound meets UL-94 V-0 flammability and maintains low ionic contamination for long-term electrical reliability.

OPTOLINQ™ WMC-G279 long-term package reliability with low mold shrinkage, controlled CTE, and low ionic contamination. Its alumina-silica filler system, ion catcher function, and optional low-alpha grade provide stable mechanical, thermal, and electrical performance for high-density semiconductor designs with strict reliability and processing requirements.

Specifications

Property	Value	Unit
General Properties		
Filler sieving size	106	µm
Specific gravity	1.88 ±0.02	–
Spiral flow at 175 °C	85 ±5%	cm
Chemical Properties		
Ion content		
Chloride (Cl ⁻) concentration	18 ±1	ppm
Sodium (Na ⁺) concentration	10 ±1	ppm
Water absorption (PCT 24 h)	0.5 ±0.05%	%
pH of extract	6.7 ±0.02	–
Electrical conductivity of extract	40 ±3	µS/cm
Mechanical Properties		
Flexural strength at 25 °C	155 ±5%	MPa
Flexural modulus at 25 °C	16.6 ±5%	GPa
Tab pull adhesion to Cu	5.5 ±1	MPa
Optical Properties		
Transmittance at 940 nm (1 mm)	45	%
Electrical Properties		
Volume resistivity at 25 °C	5.0 × 10 ¹⁵	Ω·cm
Comparative tracking index	300	V

Thermal Properties

Glass transition temperature	180 ±5	°C
Coefficient of thermal expansion, α1	14	ppm/°C
Coefficient of thermal expansion, α2	53	ppm/°C
Gel time at 175 °C	22	s
Flammability rating	V-0	UL-94

Recommended mold parameters

Parameter	Value	Unit
Molding temperature	170–180	°C
Transfer pressure	40–70	kgf/cm ²
Transfer time	10–20	s
Cure time at 175 °C	120–150	s
Post mold cure time at 175 °C	6–8	h

The curing conditions provided are recommended guidelines based on typical laboratory results. Actual curing parameters should be defined and validated by the user to ensure compatibility with specific materials, part geometries, and end-use requirements. It is the user's responsibility to optimize and confirm curing conditions that meet their performance and quality standards.

Processing Instructions

- Before use, let OPTOLINQ™ WMC-G279 reach room temperature (23 ±5 °C) 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

OPTOLINQ WMC-G279 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.

The technical information presented in this document is provided for reference only and does not constitute a guarantee of specific properties or performance. Actual results may vary depending on individual conditions and application methods. Users are strongly advised to perform their own testing and validation to determine suitability for their intended use and compliance with relevant regulations