

OPTOLINQ™ PM-1213

Optically clear silicone potting



- High optical transparency
- Excellent thermal resistance
- Excellent adhesion to different materials

OPTOLINQ™ PM-1213 is a two-component clear silicone rubber potting specifically designed for the encapsulation and bonding of optoelectronic chip on board (COB) packages. Its refractive index (1.41) and exceptional transparency minimizes optical interference, making it ideal for high-performance LED packaging applications.

OPTOLINQ™ PM-1213 advanced formulation provides excellent light and thermal stability, ensuring long-term performance even under challenging environmental conditions. The high adhesion strength and high elasticity of **PM-1213** make it versatile for demanding applications where reliability is crucial.

Property	Value	Unit
Premixed properties		
Part A Appearance	Transparent, Translucent	-
Part B Appearance	Transparent, Translucent	-
Part A Viscosity at 25°C	3,300	cP
Part B Viscosity at 25°C	9,000	cP
Mixed properties		
Mixed Viscosity	4100	cP
Mixing Ratio by Weight	100:100	-
Pot life at 25°C	5	hours
Refractive Index	1.41	-
Initial Curing Schedule	1 hr at 95°C	-
Post Mold Curing Schedule	4 hr at 150°C	-
Cured properties		
Shore Hardness	48	Shore A
Tensile Strength	6	MPa
Elongation at Break	130	%
Transmittance	—	%
*Sample thickness = 2 mm **Sample thickness = 1 mm >99** at 450 nm		

Typical properties were measured at 25 °C.
Recommended ramp up temperature is 5°C/minute from ambient.

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.

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Processing Instructions:

- Mix Parts A and B in a 100:100 weight ratio. Ensure that the mixture is uniform and free from streaks or unevenness.
- Defoam the mixture under vacuum.
- Typical curing and temperature ramp-up conditions are recommended and should be optimized based on the package being encapsulated.

Precautions:

1. Addition-cure materials may be susceptible to inhibition by certain substances, including organotin and other organometallic compounds, silicone rubber with organotin catalyst, sulfur-containing materials such as polysulfones, amines, urethanes, amine-containing materials, unsaturated hydrocarbon plasticizers, and some solder flux residues. Always exercise caution and conduct thorough compatibility testing when encountering materials or chemicals of concern in your specific application to prevent potential curing issues.
2. 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.
3. Maintain a clean and ventilated workplace, using extraction trunks when necessary.
4. Wear appropriate protective equipment and minimize direct contact with the human body. Refer to the 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.

Cleaning

Uncured silicone can be easily removed using common hydrocarbon solvents, such as acetone or xylene. Polar solvents, including water and alcohols, are not recommended for this application.

Storage and Handling

Store in a ventilated, dry, and clean environment below 25 °C. Do not allow moisture to come into contact with these materials. Containers should always remain tightly sealed. For partially filled containers, it is recommended to purge them with dry air or inert gases like nitrogen to maintain product integrity. At proper storage conditions, Part A and B have a shelf life of 6 months.

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.

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