

# OPTOLINQ OLS-5812



## Two-part thermal-resistant silicone encapsulant

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

**OPTOLINQ OLS-5812** is a two-part silicone encapsulant designed for the encapsulation of high-power LED products. Engineered with a focus on enhancing thermal stabilities, OLS-5812 contains less low molecular weight substances, considerably improving its heat resistance and adhesion strength. It also contains additives like antioxidants, which retards thermo-oxidative aging and prolongs the product lifespan. OLS-5812 offers good process compatibility. It is an ideal choice for industries seeking reliability, peak performance, and processability.

### Premixed properties

Property	Part A	Part B
Appearance	Transparent to translucent	Transparent to translucent
Viscosity	9±5 cP	20000±4000 cP
Shelf life	183 days	183 days

### Mixed properties

Property	Value	Unit
Mixing ratio	1:10	–
Viscosity	3900±600	cP
Refractive index	1.48–1.50	–
Pot Life at 25 °C	4	hours

### Cured properties

Property	Value	Unit
Hardness	43±3	Shore D
Glass transition temperature	30	°C
Transmittance at 450 nm* Sample thickness = 2 mm	>95	%

Typical properties were measured at 25 °C.

The data and information provided in this datasheet are intended for informational purposes only and may not be considered as representative of standard values. Users are advised to verify specific requirements and conduct independent testing, as needed, to ensure compatibility and performance in their unique applications.

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## Processing Instructions:

- Mix Parts A and B in a 1:10 weight ratio. Ensure that the mixture is uniform and free from streaks or unevenness.
- If air bubbles are entrapped during mixing, degas the mixture under vacuum.
- Typical curing conditions: First cure at 110–130 °C for 100–200 s, followed by post cure at 150 °C for 2 h.

## 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 Material 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 toluene and hexane. 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.

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