

INVISISIL™ OP2012L THERMAL CURE OPTICAL BONDING SILICONE

Description

INVISISIL OP2012L Thermal Cure Optical Bonding Silicone is a two-component, low viscosity silicone gel used for optical bonding applications. This product will typically cure at 60 degree C in approximately 30 minutes to a soft, tacky gel with the addition of a curing agent. It is an excellent candidate to consider for optical bonding products for injection solutions.

Key Features and Typical Benefits

- Low viscosity – easily pourable
- Convenient 1:1 mix ratio by weigh
- Room temperature curability and heat accelerated cure
- Shock absorption and protection of delicate mechanical components from vibration
- Absence of reactive by-products that may contribute to corrosion

Potential Applications

- Optical bonding for Automotive and Consumer Displays

Typical Physical Properties

| <u>Product</u> | <u>OP2012L</u> | |
|--------------------|----------------|-------------|
| Uncured Properties | (A) | (B) |
| Appearance | Transparent | Transparent |

| | | |
|------------------------------------|-----------------------|-----|
| Viscosity*1 Pa.s | 0.1 | 0.1 |
| Mixing ratio(Weight) | 100 | 100 |
| Viscosity after mixing Pa.s | 0.1 | |
| Reflective index | 1.41 | |
| Percent Transmittance(400nm)*2 % | >99 | |
| Percent Transmittance(800nm)*2 % | >99 | |
| Cured Properties | | |
| Cure condition | 60°C × 30mins | |
| Hardness Type E | 5 | |
| Specific gravity g/cm ³ | 0.97 | |
| Lap shear strength MPa | 0.3 | |
| Volume resistivity MΩ·m | 1.0 × 10 ⁷ | |
| Dielectric strength kV/mm | 18 | |
| Dielectric constant 60Hz | 2.7 | |
| Dielectric loss 60Hz | 0.002 | |
| Haze *2 % | 0.05 | |
| Y.I.(D1925) | 0.03 | |

*1: Rotary viscometer. *2:0.2mm thickness *3: Glass, 0.2mm thickness

Typical properties are average data and are not to be used as or to develop specifications.

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General Considerations for Use

- Materials such as water, sulfur, nitrogen compounds, organic metallic salts, phosphorus compounds, etc. contained in the surface of the substrate can inhibit curing. A sample patch should always be tested prior to proceeding in order to determine compatibility.
- All parts should be as clean and dry as possible prior to application.
- Eye protection and protective gloves should be worn at all times when working with this product.
- Maintain adequate ventilation in the work place at all times.
- Keep out of the reach of children.
- Store in a cool dry place out of direct sunlight.

Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

Product Safety, Handling and Storage

Customers should review the latest Safety Data Sheet (SDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, emergency service contact information, and any special storage conditions required for safety. Momentive Performance Materials (MPM) maintains an around-the-clock emergency service for its products. SDS are available at www.momentive.com or, upon request, from any MPM representative. For product storage and handling procedures to maintain the product quality within our stated specifications, please review Certificates of Analysis, which are available in the Order Center. Use of other materials in conjunction with MPM products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

Limitations

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

Contact Information

For product prices, availability, or order placement, contact our customer service at Momentive.com/CustomerService/

For literature and technical assistance, visit our website at: www.momentive.com

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Contact Information

Email

commercial.services@momentive.com

Telephone

| Americas | Latin America | EMEAI- Europe, Middle East, Africa & India | ASIA PACIFIC |
|-----------------|----------------------|---|---------------------|
| +1 800 295 2392 | Brazil | Europe | China |
| Toll free* | +55 11 4534 9650 | +390510924300 | 800 820 0202 |
| +704 805 6946 | Direct Number | Direct number | Toll free |
| Direct Number | | | +86 21 3860 4892 |
| | | | Direct number |

| | | | |
|-------------------------|--|--|--|
| *All American countries | Mexico +52 55 2169 7670 Direct Number | India, Middle East & Africa + 91 44 71212207 Direct number* | Japan +81 3 5544 3111 Direct number |
| | | *All Middle Eastern countries, Africa, India, | Korea +82 2 6201 4600 |

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