



## Liquid Optical Bonding for Display Applications



**Momentive Performance Materials provides leading-edge silicone technologies to help its customers meet performance and productivity challenges in a wide range of automotive and electronic applications.**

Momentive is a pioneer in developing solutions for silicone optical bonding, with a portfolio of proven materials that are in wide use around the world. Momentive offers a wide range of off-the-shelf solutions to help deliver design flexibility and long-term reliability to components operating under harsh conditions.

### Key Features

- High transmittance
- Low cure shrinkage
- Good elasticity
- High stability, low modulus

### Typical Benefits

- Optical clarity
- Stability/low modulus to help avoid Mura effect
- CTE mismatch relief
- Durable in harsh environments
- Outgas permeability for use on plastics
- Wide working temperature range

### Potential Applications

- Displays for high ambient light environments
- Automotive, consumer, and industrial electronics
- Heavy-duty displays and touch-screens
- Direct view technologies
- Optical potting and other functional applications
- Display, screen, and touch sensor layers in structure

## Optical Products and Typical Properties

(selected grades only; please contact us for material selection support)

		OP2131SD	OP1131D	OP2012S	OP1012	SN3001	SN1001	OP1912 (translucent)	OP1912-B (black)
Cure type		UV	UV	Thermal	Thermal	Thermal (Snap cure)	Thermal (Snap cure)	Thermal	Thermal
Cure condition <sup>1</sup>		3000 mJ/cm <sup>2</sup>	3000 mJ/cm <sup>2</sup>	60°C x 30 min	60°C x 30 min	Gel time 23°C x 30 min. Full adhesion. 2 days	Gel time 23°C x 18 min. Full adhesion. 2 days	60°C x 30 min	60°C x 30 min
Viscosity (mPa.s)		2300	2900	800	800	1000	1000	98800	98800
Adhesion (MPa) <sup>2</sup>		0.3	0.4	0.4	0.2	0.6	0.6	-	-
Hardness		7 (E)	Gel	25(E)	Gel	Gel	Gel	Gel	Gel
Transmittance (%) <sup>3</sup>	400nm	99	99	99	99	99	99	-	-
	800nm	99	99	99	99	99	99	-	-
Color coordinate (D65)	L*	99.89	99.7	99.83	99.96	99.88	99.88	-	-
	a*	-0.14	-0.14	-0.18	-0.16	-0.15	-0.15	-	-
	b*	0.08	0.12	0.02	0.01	0.05	0.03	-	-
Haze (%)		0.2	0.2	0.05	0.01	0.05	0.05	-	-

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

Footnotes: 1. Metal halide/Oven. 2. GL-GL 150um thickness. 3. 1mm thickness



www.momentive.com

260 Hudson River Road,  
Waterford, NY 12188 USA

+1 800 295 2392

+1 614 986 2495

For more information and sampling inquiries, please visit [momentive.com/CustomerService](https://www.momentive.com/CustomerService)

#### 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](https://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.

#### DISCLAIMER:

THE MATERIALS, PRODUCTS AND SERVICES OF MOMENTIVE PERFORMANCE MATERIALS INC. AND ITS SUBSIDIARIES AND AFFILIATES (COLLECTIVELY "SUPPLIER"), ARE SOLD SUBJECT TO SUPPLIER'S STANDARD CONDITIONS OF SALE, WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT, PRINTED ON THE BACK OF ORDER ACKNOWLEDGMENTS AND INVOICES, AND AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION, RECOMMENDATIONS, OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SUPPLIER MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING ITS PRODUCTS, MATERIALS, SERVICES, RECOMMENDATIONS OR ADVICE. EXCEPT AS PROVIDED IN SUPPLIER'S STANDARD CONDITIONS OF SALE, SUPPLIER AND ITS REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS OR SERVICES DESCRIBED HEREIN. Each user bears full responsibility for making its own determination as to the suitability of Supplier's materials, services, recommendations, or advice for its own particular use. Each user must identify and perform all tests and analyses necessary to assure that its finished parts incorporating Supplier's products, materials, or services will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of Supplier's standard Conditions of Sale or this Disclaimer, unless any such modification is specifically agreed to in a writing signed by Supplier. No statement contained herein concerning a possible or suggested use of any material, product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Supplier covering such use or design, or as a recommendation for the use of such material, product, service or design in the infringement of any patent or other intellectual property right.

Momentive and the Momentive logo are trademarks of Momentive Performance Materials Inc.  
Copyright 2017, Momentive Performance Materials Inc. All rights reserved.

04/2017