



INVISISIL™

Silicone Solutions for Optical Bonding



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.

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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
- 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 touchscreens
- Direct view technologies

Optical Bonding Materials

LOCA Material Portfolio

Product	System	Mix Ratio [by weight]	Viscosity [Pas]	Penetration [1/10mm]	Transparency	Cure Condition	Feature
OP1012	AC	1 to 1	0.8	65	>99 %	30min at 70°C	Thermal cure and high elongation
SN1001	AC	1 to 1	1.0	40	>99 %	Gel Time 18min or 30min at 60°C	Excellent adhesion, fast cure at RT
SN3001	AC	1 to 1	1.0	40	>99 %	Gel Time 30min or 30min at 60°C	Excellent adhesion
SN3003HR	AC	1 to 1	3.3	58	>99 %	Gel Time 40min or 30min at 60°C	Excellent adhesion; HRI 1.51
SN4591	AC	1 to 1	0.1	23	>99 %	Gel Time 45min or 30min at 60°C	Very low viscosity, excellent adhesion; suitable for injection process
XE13-OP007	AC/UV	1P	2.5	35	>99 %	UV 365nm LED, >1000mJ/cm ²	UV cure, preactivated with shadow-cure capability, good adhesion
XE14-D0059	AC/UV	1 to 1	7.0	35	>99 %	UV 365nm LED, >1000mJ/cm ²	UV cure, preactivated with shadow-cure capability, good adhesion
OP1822	AC/UV	1 to 1	46	20	>99 %	UV 365nm LED, >1000mJ/cm ²	High viscosity stencil printable, good adhesion

DAM Material Portfolio

Product	System	Mix Ratio [by weight]	Viscosity [Pas]	Penetration [1/10mm] / Hardness	Color	Cure Condition	Feature
OP1912	AC	1 to 1	89	58	Translucent	30min at 60°C	Stress absorbing thixotropic gel
OP1922	AC/UV	1 to 1	66	45	Black	UV 365nm LED, >3000mJ/cm ²	Black thixotropic gel
OP2922	AC/UV	10 to 1	50	50 shore 00	Translucent	UV 365nm LED, >4000mJ/cm ²	Thixotropic gel, higher hardness

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

1P = One Part
AC = Addition Cure
HRI = High Refractive Index
RT = Room Temperature
LOCA = Liquid Optically Clear Adhesive

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.

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