

INVISISIL™ XE14-D0059 (OP1222)

OPTICAL BONDING GEL

Product Description

INVISISIL™ XE14-D0059, is a two-component, soft and sticky silicone gel that can be used for optical bonding in the automotive industry. This product boasts a range of features that set it apart from its competitors, including fast UV activation and a convenient 1:1 mix ratio by weight. With a relatively medium range viscosity, the gel is easily pourable for slit die coating use. It also provides exceptional shock absorption and protection of delicate mechanical components from vibration.

Key Features and Typical Benefits

- UV curable
- Medium viscosity, the gel is easily pourable for slit die coating use soft, tacky and sticky gel
- Absorbs shock and protects delicate mechanical components from vibration
- Curing results in no reactive by-products; Excellent resistance to corrosion

Recommended Applications/Basic Uses:

- Optical Bonding

Typical Physical Properties

Properties	XE14-D0059	
	(A)	(B)
Uncured Properties (23°C)		
Appearance	Transparent	Transparent
Viscosity [Pas] @ 23°C	7.5	7.5
Mix Ratio	1:1	
Specific Gravity [g/cm ³]	0.97	0.97
Refractive Index	1.41	1.41
Transmittance @ 400nm [%]	99	99
Transmittance @ 800nm [%]	99	99
Cured properties*		
Appearance	Transparent	
Penetration [1/4 cone] – x10	35	
Lap Shear Strength [MPa] @ 0.3mm	0.3	
Glass to Glass		
Youngs Modulus [MPa]	0.06	
Dielectric Constant @ 60Hz	2.8	
Volume Expansion [ppm]	330	
Thermal Conductivity [W/mK]	0.17	
Haze	<0.1	
Yellowness Index (D1925)	<0.3	
b*	<0.1	

Optical properties (Haze~b*) specimen: Glass (1mm) / LOCA (180um) /Glass (1mm)

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

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 always worn when working with this product.
- Always maintain adequate ventilation in the workplace.
- Keep out of the reach of children.

Storage

- Store in a cool dry place out of direct sunlight
- Shelf life at room temperature (23°C) is 9 months

Available Package

- 13Kg Steel Pail
- 1L Bottle

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.

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