

InvisiSil™ IVS9520 Highly Transparent Glob Top

Description

InvisiSil* IVS9520 is two-component, high transparency, low viscosity and thixotropic liquid silicone rubber. This product cures with heat to an elastic rubber and can help provide high heat/UV-light resistance.

InvisiSil IVS9520 highly transparent glob top can enable consistent dispensing performance and flow-ability to form a good dome shape for COB (chip on board) LED and SMD LED Package.

Key Features and Typical Benefits

- Self-Dome Lens Formation
- High transparency
- No yellowing
- Excellent high and low temperature resistance
- UV resistance
- Excellent adhesion
- Thixotropic consistency

Typical Physical Properties

<u>Typical Physical Properties of the Uncured Rubber</u>		A Component	B Component
Appearance		Translucent	Turbid
Viscosity (23 ° C)	Pa.s	9	0.5

Mix ratio by weight			5.1
Viscosity after mixing (23 ° C) ⁽¹⁾	Pa.s		18
Viscosity after mixing (23 ° C) ⁽²⁾	Pa.s		81
Pot Life (23 ° C)	hr		8
⁽¹⁾ ; No. 6 spindle, 20rpm ⁽²⁾ ; No. 6 spindle, 2rpm <u>Typical properties of the cured rubber:</u> Mixing ration of components A : B = 5 : 1; Curing : 3hr. 150°C			
Basic Properties			
Density (23 ° C)	JIS K 6249	g/cm3	1.08
Shore A hardness	JIS K 6249		50
Tensile strength	JIS K 6249	MPa	6.8
Elongation at break	JIS K 6249	%	130
Lap shear strength (Aluminum)		MPa	2.5
Optical Properties			
Transmittance (1mm) %		400nm	96
		700nm	98
Refractive Index at 25°C : 589nm		(ⁿ _D ²⁵)	1.43
Thermal Properties			
CTE linear (40-90°C)		ppm/°C	270

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

*InvisiSil is a trademark of Momentive Performance Materials Inc.

Potential Applications

InvisiSil IVS9520 highly transparent glob top is an excellent candidate to consider for use in the following elastomeric articles:

- LED Lighting COB and lens application
- Other illumination optics

- Auto Lighting COB and lens application
 - Electronics Flash lens of mobile phone camera module
- Sensing lenses
- Other optics
- Solar Secondary optics for concentrating PVs

General Considerations for Use

Each of the components ((A) and (B)) need to be weighed out to the clean container by ratio of 5:1. And then, mix them thoroughly with clean tools to generate thixotropy. Careful mixing (especially on the bottom and the side of the container) is necessary. The mixture needs to be deaerated to remove air entrapped during mixing. Dispense the mixture on the part to cure with heat. Stepwise cure is recommended. Recommended conditions are 80°C for 1hr (1st step) and 150°C for 3hrs (2nd step). All parts should be as clean and dry as possible prior to applications. Materials such as water, sulfur, nitrogen compounds, organic metallic salts, phosphorus compounds, etc. contained in the surface of the substrate can inhibit curing. It is recommended that a preliminary test is performed to determine the compatibility.

Packaging Types

InvisiSil IVS9520 highly transparent glob top currently is available in bottle kit (5P of 500g-A and 1P of 500g-B)

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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