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

<table>
<thead>
<tr>
<th>Typical Physical Properties of the Uncured Rubber</th>
<th>A Component</th>
<th>B Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Translucent</td>
<td>Turbid</td>
</tr>
</tbody>
</table>

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### Typical properties of the cured rubber:
Mixing ratio of components A : B = 5 : 1;
Curing : 3hr. 150ºC

### Basic Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density (23 º C)</td>
<td>g/cm³</td>
<td>1.08</td>
</tr>
<tr>
<td>Shore A hardness</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>MPa</td>
<td>6.8</td>
</tr>
<tr>
<td>Elongation at break</td>
<td>%</td>
<td>130</td>
</tr>
<tr>
<td>Lap shear strength (Aluminum)</td>
<td>MPa</td>
<td>2.5</td>
</tr>
</tbody>
</table>

### Optical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmittance (1mm) %</td>
<td></td>
<td>400nm 96</td>
</tr>
<tr>
<td></td>
<td></td>
<td>700nm 98</td>
</tr>
<tr>
<td>Refractive Index at 25ºC : 589nm</td>
<td>(n_0^25)</td>
<td>1.43</td>
</tr>
</tbody>
</table>

### Thermal Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTE linear (40-90ºC)</td>
<td>ppm/ºC</td>
<td>270</td>
</tr>
</tbody>
</table>

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

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**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

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- Auto Lighting  
  COB and lens application  
- Electronics  
  Flash lens of mobile phone camera module  
  Sensing lenses  
- 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.

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

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