InvisiSil* SN1001

Description
InvisiSil SN1001 is a two-component, high elongation silicone gel used for optical bonding applications. This product will typically provide tack free time at room temperature in ~10 minutes to form a soft, tacky gel with the addition of a curing agent. The soft nature and cushioning effect of this product offers excellent protection of electronic assemblies from external humidity, mechanical shock and vibration.

Key Features and Typical Benefits

- Convenient 1:1 mix ratio by weight/volume
- Middle viscosity – easily pourable
- Room temperature curability
- Soft, tacky and sticky gel
- Shock absorption and protection of delicate mechanical components from vibration
- Absence of reactive by-products that may contribute to corrosion

Potential Applications

- Optical bonding

Typical Physical Properties

<table>
<thead>
<tr>
<th>Uncured properties</th>
<th>SN1001</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Appearance</td>
<td>Transparent</td>
</tr>
<tr>
<td>Viscosity (23\degree C)</td>
<td>1.0</td>
</tr>
<tr>
<td>After mixing (23\degree C)</td>
<td>1.1</td>
</tr>
<tr>
<td>Mix ratio by weight/volume</td>
<td>1:1</td>
</tr>
<tr>
<td>Refractive Index</td>
<td>1.4</td>
</tr>
<tr>
<td>Specific gravity (23\degree C)</td>
<td>0.97</td>
</tr>
<tr>
<td>Percent transmittance (1mm thickness 400nm) %</td>
<td>&gt;99</td>
</tr>
<tr>
<td>Percent transmittance (1mm thickness 800nm) %</td>
<td>&gt;99</td>
</tr>
<tr>
<td>Cured properties (0.5hr@60\degree C)</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Transparent gel</td>
</tr>
</tbody>
</table>
Penetration 40
Lap shear strength (Thickness 0.15mm) MPa 0.5
Youngs modulus MPa 0.015
Volume resistivity MΩ·m{Ω·cm} 1.0x10^7{1.0x10^{15}}
Dielectric strength kV/mm 18
Dielectric constant (60Hz) 2.7
Dielectric loss (60Hz) 0.002
Volume expansion 1/K 1x10^{-3}
Thermal conductivity W/mK {cal/cm·s·°C} 0.17 {4.1x10^{-4}}
Haze % 0.1
Percent transmittance (400nm) % 99
YI (D1925) 0.1
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 specification.

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 worn at all times when working with this product.
- Maintain adequate ventilation in the work place at all times.
- Keep out of the reach of children.
- Store in a cool dry place out of direct sunlight.

Patent Status
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