OP1112 Thermal Cure Optical Bonding Gel

Description

OP1112 thermal cure optical bonding gel is a two-component, high elongation silicone gel. Excellent candidate of optical bonding applications. This product cures at 60 °C / 30 min. to a soft, tacky gel with the addition of a curing agent. The soft nature and cushioning effect of this product offers excellent protection to electronic assemblies from external humidity, mechanical shock and vibration.

Key Features and Typical Benefits

• Convenient 1:1 mix ratio by weight
• Heat curability at 60 °C / 30 minutes
• Soft, tacky and sticky gel
• Shock absorption for protection of delicate mechanical components from vibration
• Non-corrosive by-products

Typical Physical Properties

<table>
<thead>
<tr>
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<th>OP1112 gel</th>
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<tbody>
<tr>
<td>Uncured Properties</td>
<td></td>
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<tr>
<td>Appearance</td>
<td>A</td>
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<tr>
<td>Viscosity (23 °C)</td>
<td>Pa.s</td>
</tr>
<tr>
<td>Mix Ratio</td>
<td>1:1</td>
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<tr>
<td>Refractive Index</td>
<td>1.4</td>
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<tr>
<td>Percent Transmittance (1mm thickness 400nm)</td>
<td>%</td>
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<tr>
<td>Percent Transmittance (1mm thickness 800nm)</td>
<td>%</td>
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<tr>
<td>Cured Properties (0.5hr at 60 °C)</td>
<td>Appearance</td>
</tr>
</tbody>
</table>
Penetration | 40  
Specific Gravity | g/cm³ | 0.97  
Lap Shear Strength(2) | MPa | 0.30  
Dielectric Constant (60Hz) | 2.7  
Dielectric Loss (60Hz) | 0.002  
Haze(3) | % | 0.04  
YI (D1925)(3) | 0.13  

1) Brookfield Viscometer  
2) Glass (1mm) / LOCA (150um) / Glass (1mm)  
3) Glass (1mm) / LOCA (180um) / Glass (1mm)  

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

Potential Applications
- Optical bonding for Automotive, Consumer Display

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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