**Product Information**

**Gels**

**Dow Corning® 3-6371 UV Gel**

**FEATURES & BENEFITS**
- 1-part UV cure with moisture secondary cure
- Very soft
- Suitable for very low temperatures
- No mixing required
- UV curable for extremely fast processing speeds
- Moisture secondary cure for shadowed areas
- Gel remains flexible in very low temperature applications

1-part, very soft, translucent, UV cure, low temperature gel

**APPLICATIONS**
- *Dow Corning®* 3-6371 UV Gel is suitable for potting and protecting of electronics devices in very high throughput manufacturing process using very fast and low temperature UV curing technology together with a secondary moisture cure for shadowed areas.

**TYPICAL PROPERTIES**
Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td></td>
<td>Light Amber</td>
</tr>
<tr>
<td>Viscosity</td>
<td>cP</td>
<td>850</td>
</tr>
<tr>
<td></td>
<td>mPa-sec</td>
<td>850</td>
</tr>
<tr>
<td></td>
<td>Pa-sec</td>
<td>0.85</td>
</tr>
<tr>
<td>Specific Gravity (Uncured)</td>
<td></td>
<td>0.98</td>
</tr>
<tr>
<td>Gel Hardness</td>
<td>grams</td>
<td>40</td>
</tr>
<tr>
<td>Penetration</td>
<td>1/10 mm</td>
<td>140</td>
</tr>
<tr>
<td>UV Cure, Time to 90% Gel Hardness (15 mm thickness @ 4000 mJ/cm²)</td>
<td>seconds</td>
<td>25</td>
</tr>
<tr>
<td>Dielectric Strength</td>
<td>volts/mil</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td>kV/mm</td>
<td>12</td>
</tr>
<tr>
<td>Dielectric Constant at 100 Hz</td>
<td></td>
<td>2.81</td>
</tr>
<tr>
<td>Dielectric Constant at 100 kHz</td>
<td></td>
<td>2.81</td>
</tr>
<tr>
<td>Volume Resistivity</td>
<td>ohm*cm</td>
<td>1.9E+12</td>
</tr>
<tr>
<td>Dissipation Factor at 100 hz</td>
<td></td>
<td>0.0047</td>
</tr>
<tr>
<td>Dissipation Factor at 100 kHz</td>
<td></td>
<td>0.00006</td>
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</tbody>
</table>

**DESCRIPTION**
This group of gels addresses special needs to enable your designs in a reliable and cost effective manner. This family include thixotropic gels that provide controlled flow, fluorogels with resistance to some solvents and fuels, controlled volatility gels for sensitive applications, and UV curing gels for very fast and low temperature cure. Gels are a special class of encapsulants that cure to an extremely soft material. Gels cure in place to form cushioning, self-healing, resilient materials.

Cured gels retain much of the stress relief and self-healing qualities of a liquid while providing the dimensional stability of an elastomer which is increasingly needed for delicate components. Gels have been used to isolate circuits from the harmful
effects of moisture and other contaminants and provide electrical insulation for high voltages. Another use is providing stress relief to protect circuits and interconnections from thermal and mechanical stresses. Gels are usually applied in thick layers to totally encapsulate higher architectures. More recently, gels have found application in optoelectronics due to their stress relieving capability and high refractive index, as well as the stability of these properties over time.

MIXING AND DE-AIRING
Some gels are supplied in bladder packs that avoid direct air contact with the liquid gel components, allowing use of air pressure over the pack in a pressure pot for dispensing. Do not apply air pressure directly to the liquid gel surface (without the bladder pack) as the gel can become supersaturated with air and bubbling can occur when the material is dispensed and cured. Use of bladder packs prevents bubbling, maintains cleanliness and avoids gel contamination. Gels can be dispensed manually or by using one of the available types of meter mix equipment. If possible, the potential for entrapment and incorporation of gas (typically air) should be considered during design of the part and selection of a process to dispense the gel. This is especially important with higher-viscosity and faster curing gels. Degassing at >28 inches (10–20 mm) Hg vacuum may be necessary to ensure a void-free, protective layer.

USEFUL TEMPERATURE RANGES
For most uses, silicone elastomers should be operational over a temperature range of -45 to 200°C (-49 to 392°F) for long periods of time. However, at both the low- and high temperature ends of the spectrum, behavior of the materials and performance in particular applications can become more complex and require additional considerations. For low-temperature performance, thermal cycling to conditions such as -55°C (-67°F) may be possible, but performance should be verified for your parts or assemblies. Factors that may influence performance are configuration and stress sensitivity of components, cooling rates and hold times, and prior temperature history. At the high-temperature end, the durability of the cured silicone elastomer is time and temperature dependent. As expected, the higher the temperature, the shorter the time the material will remain usable.

COMPATIBILITY
Certain materials, chemicals, curing agents and plasticizers can inhibit the cure of addition cure adhesives. Most notable of these include: Organotin and other organometallic compounds, Silicone rubber containing organotin catalyst, Sulfur, polysulfides, polysulfones or other sulfur containing materials, unsaturated hydrocarbon plasticizers, and some solder flux residues. If a substrate or material is questionable with respect to potentially causing inhibition of cure, it is recommended that a small scale compatibility test be run to ascertain suitability in a given application. The presence of liquid or uncured product at the interface between the questionable substrate and the cured gel indicates incompatibility and inhibition of cure.

REPAIRABILITY
In the manufacture of electronic devices, salvage or rework of damaged or defective units is often required. Removal of Dow Corning® Dielectric Gels are available dual cartridge, one-gallon pails, five gallon pails and 55-gallon drums. Not all gels may be available in all packages, and some additional packages and package sizes may be available.

LIMITATIONS
This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

HEALTH AND ENVIRONMENTAL INFORMATION
To support customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance.
(PS&RC) specialists available in each area.

For further information, please see our website, dowcorning.com or consult your local Dow Corning representative.

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