MED-4970
Liquid silicone rubber

DESCRIPTION
— Two-part, translucent silicone system used with injection molding equipment
— Cures with heat via addition-cure chemistry
— 1:1 Mix Ratio (Part A: Part B)

APPLICATION
— For the injection molding of parts requiring a material with a high durometer including: molded rubber stoppers, gaskets, seals, valves, o-rings and other precision parts
— Suitable for over-molding applications
— Can be used with NuSil’s Healthcare color masterbatches for applications requiring colored silicones

NuSil™ MED-4970 shall not be considered for use in human implantation for a period of greater than 29 days.

PROPERTIES

<table>
<thead>
<tr>
<th>Typical Properties</th>
<th>Average Result</th>
<th>Standard</th>
<th>NT-TM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Uncured:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Translucent</td>
<td>ASTM D2090</td>
<td>002</td>
</tr>
<tr>
<td>Extrusion Rate**, Part A</td>
<td>32 g/min</td>
<td>ASTM C603</td>
<td>033</td>
</tr>
<tr>
<td>Extrusion Rate**, Part B</td>
<td>50 g/min</td>
<td>ASTM C603</td>
<td>033</td>
</tr>
<tr>
<td>Work Time</td>
<td>&gt;72 hours</td>
<td>-</td>
<td>008</td>
</tr>
<tr>
<td><strong>Cured: 5 minutes at 165°C (329°F)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.22</td>
<td>ASTM D792</td>
<td>003</td>
</tr>
<tr>
<td>Durometer, Type A</td>
<td>70</td>
<td>ASTM D2240</td>
<td>006</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>1,325 psi (9.1 MPa)</td>
<td>ASTM D412</td>
<td>007</td>
</tr>
<tr>
<td>Elongation</td>
<td>465%</td>
<td>ASTM D412</td>
<td>007</td>
</tr>
<tr>
<td>Tear Strength</td>
<td>240 ppi (42.3 kN/m)</td>
<td>ASTM D624</td>
<td>009</td>
</tr>
<tr>
<td>Stress at 200% Strain</td>
<td>825 psi (5.7 MPa)</td>
<td>ASTM D412</td>
<td>007</td>
</tr>
<tr>
<td>Tissue Culture (Cytotoxicity Testing)</td>
<td>Pass</td>
<td>USP &lt;87&gt;</td>
<td>061</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ISO 10993-5</td>
<td></td>
</tr>
</tbody>
</table>
INSTRUCTIONS FOR USE

Mixing
Combine Part A and Part B in a 1:1 mix ratio prior to use. Airless mixing, metering or dispensing equipment is recommended for production operations. If mixing by hand, take care to minimize air entrapment.

Vacuum Deaeration
Remove air entrapped during mixing by common vacuum deaeration procedure, observing all applicable safety precautions. Slowly apply full vacuum to a suitable container of at least four times the volume of material being de-aired. Hold vacuum until bulk deaeration is complete.

Substrate Considerations
Cures in contact with most materials common to biomedical assemblies, exceptions include: sulfur-cured organic rubbers, latex, chlorinated rubbers, some RTV silicones and unreacted residues of some curing agents.

Vulcanization
Curing of the blended elastomer is accelerated by heat. The pre-measured catalyst provides a fixed cure rate. Do not attempt to change molding times by mixing the two components in any other than a 1:1 ratio, as this will affect the properties of the elastomer. Only temperature adjustments should be employed to alter the rate of cure.

Note: Some bonding applications may require the use of a primer. NuSil Technology’s MED-161 is suggested. For more information on primer selection, visit www.nusil.com and review Choosing a Silicone Primer/Adhesive System.

FDA MASTER FILE
A Master File for MED-4970 has been filed with the U.S. Food and Drug Administration. Customers interested in authorization to reference the Master File must contact NuSil Technology.

REACH COMPLIANCE
Please contact NuSil Technology’s Regulatory Compliance department with any questions or for further assistance.

SPECIFICATIONS
Do not use the properties shown in this technical profile as a basis for preparing specifications. Please contact NuSil Technology for assistance and recommendations in establishing particular specifications.

WARRANTY INFORMATION
The warranty period provided by NuSil Technology LLC (hereinafter “NuSil Technology”) is 12 months from the date of shipment when stored below 40°C in original unopened containers. Unless NuSil Technology provides a specific written warranty of fitness for a particular use, NuSil Technology’s sole warranty is that the product will meet NuSil Technology’s then current specification. NuSil Technology specifically disclaims all other expressed or implied warranties, including, but not limited to:

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<td>Elemental Analysis of Trace Metals</td>
<td>Pass</td>
<td>ASTM E305</td>
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The above properties are tested on a lot-to-lot basis. Do not use as a basis for preparing specifications. Please contact NuSil Technology for assistance and recommendations in establishing particular specifications.

** Performed using a Semco model 250-A pneumatic gun with a 1/8” nozzle orifice and 90 +/- 5 psi air pressure

Packaging
- 200 mL Side-by-Side Kit
- 400 mL Side-by-Side Kit
- 12 Ounce Kit (354 mL)
- 24 Ounce Kit (710 mL)
- 40 Ounce Kit (1.18 L)
- 2 Pint Kit (910 g)
- 2 Gallon Kit (7.28 kg)
- 4 Gallon Kit (14.56 kg)
- 10 Gallon Kit (36.4 kg)
- 2 Drum Kit (360 kg)

Warranty
- 12 Months

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NuSil Technology has tested this material only to determine if the product meets the applicable specifications. (Please contact NuSil Technology for assistance and recommendations when establishing specifications.) When considering the use of NuSil Technology products in a particular application, review the latest Material Safety Data Sheet and contact NuSil Technology with any questions about product safety information.

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