Liquid silicone rubber

**DESCRIPTION**

- Two-part, translucent silicone system designed for use 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-4860 may 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>Uncured:</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>65 g/min</td>
<td>ASTM C603</td>
<td>033</td>
</tr>
<tr>
<td>Extrusion Rate**, Part B</td>
<td>100 g/min</td>
<td>ASTM C603</td>
<td>033</td>
</tr>
<tr>
<td>Work Time</td>
<td>72 hours</td>
<td>-</td>
<td>008</td>
</tr>
<tr>
<td><strong>Cured: 5 minutes at 165°C (329°F). Stabilize for 3 hours minimum at ambient temperature and humidity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.15</td>
<td>ASTM D792</td>
<td>003</td>
</tr>
<tr>
<td>Durometer, Type A</td>
<td>60</td>
<td>ASTM D2240</td>
<td>006</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>1350 psi (9.3 MPa)</td>
<td>ASTM D412</td>
<td>007</td>
</tr>
<tr>
<td>Elongation</td>
<td>530%</td>
<td>ASTM D412</td>
<td>007</td>
</tr>
<tr>
<td>Tear Strength</td>
<td>255 ppi (45.0 kN/m)</td>
<td>ASTM D624</td>
<td>009</td>
</tr>
<tr>
<td>Tissue Culture (Cytotoxicity Testing)</td>
<td>Pass</td>
<td>USP &lt;87&gt; ISO 10993-5</td>
<td>061</td>
</tr>
</tbody>
</table>
Typical Properties | Average Result | Standard | NT-TM
--- | --- | --- | ---
Elemental Analysis of Trace Metals | Pass | ASTM E305 | 131

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.

**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 MEDI-161 is suggested. For more information on primer selection, visit www.nusil.com and review Choosing a Silicone Primer/Adhesive System.

**Packaging**
- 50 mL Side-by-Side Kit
- 200 mL Side-by-Side Kit
- 400 ml Side-by-Side Kit
- 2 Pint Kit (910 g)
- 2 Gallon Kit (7.28 kg)
- 10 Gallon Kit (36.4 kg)

**Warranty**
- 12 Months

**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.

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