Silopren* LSR 4670

Description
LSR 4670 is a two-component liquid silicone rubber for injection moulding processes. The material performance is particularly characterised by high reactivity, low viscosity and high tear strength. The LSR 4670 enables particularly the production of parts for healthcare devices covering by USP Class VI such as sealing elements, O-rings, diaphragms, ear plugs, bellows, baby teats, respiratory devices, air vent flaps, tube connectors, catheters and mats.

Key Features and Benefits
Vulcanisates consisting of LSR 4670 are distinguished by the following properties:
- Low viscosity
- Fast cure
- High tear strength
- Sterilisable with ethylene oxide, steam and gamma radiation
- Long service life at dynamic stress
- Neutral odour and taste
- High recovery after puncture
- High temperature stability

Typical Physical Properties

<table>
<thead>
<tr>
<th>Typical properties of the rubber:</th>
<th>comp. A</th>
<th>comp. B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>translucent</td>
<td>translucent</td>
</tr>
<tr>
<td>Viscosity, $\dot{\gamma} = 10$ s$^{-1}$ at 20°C</td>
<td>DIN 53018</td>
<td>550</td>
</tr>
</tbody>
</table>
The pot-life of the mixture of the two components (closed vessel) at 20°C is three days. Increased temperatures reduce the pot-life.

Typical properties of the vulcanisate:
Vulcanisation: 10 min. 175 °C + 4 hrs. 200°C post cure

<table>
<thead>
<tr>
<th>Property</th>
<th>DIN 53 479 A</th>
<th>g/cm³</th>
<th>1.13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hardness</td>
<td>DIN 53 505</td>
<td>Shore A</td>
<td>69</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>DIN 53 504 S2</td>
<td>N/mm²</td>
<td>9.5</td>
</tr>
<tr>
<td>Elongation at break</td>
<td>DIN 53 504 S2</td>
<td>%</td>
<td>350</td>
</tr>
<tr>
<td>Tear strength</td>
<td>ASTM D 624 die B</td>
<td>N/mm</td>
<td>30</td>
</tr>
<tr>
<td>Comp. Set 22h at 175°C</td>
<td>ISO 815</td>
<td>%</td>
<td>20</td>
</tr>
</tbody>
</table>

**Regulatory Complilance**

- A representative sample of an analogous product to Silopren LSR 4670 met the requirements of USP Class VI (maximum contact time with human tissue 28 days) and ISO 10993 under Good Laboratory Practices (GLP).
- The ingredients are listed in the BfR recommendation XV “Silicones” (1)
- Compositionally compliant with 21 CFR 177.2600 – Rubber articles intended for repeated use(2)
- Tested according Eur. Pharmacopia VI 3.1.9

(1) Producer of the final article needs to test and confirm that the final product meets the extraction limits of BfR XV or corresponding EU legislation.
(2) It is the responsibility of the user to determine that the final product complies with the extractive limitations and other requirements of 21 CFR 177.2600, under their specific manufacturing procedures.

**Patent Status**

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.
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For literature and technical assistance, visit our website at: www.momentive.com

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