

Momentive Performance Materials Silopren[®],ç LSR 4020 Liquid Silicone Rubber - Healthcare

Category : Polymer , Thermoset , Rubber or Thermoset Elastomer (TSE) , Silicone , Silicone Rubber

Material Notes:

LSR elastomers are a two-component, platinum (addition/heat) curable, and pumpable silicone elastomer that can be molded and cured with very fast cycle times, at elevated temperatures. The molding process allows for complex part geometry and exact dimensions. LSR elastomers are generally suitable for short cycle time injection and full automatic flash-less processing. Color pastes are available to pigmenting addition cure productions of LSR's. All LSR grades are platinum cured materials which are mixed in a 1:1 ratio by weight. The distinctive properties of silicone elastomers - purity, clarity, strength - coupled with ease of processability, have resulted in their use in a broad range of medical device applications. Silicone materials exhibit exceptional stability over a wide range of temperatures, lending themselves to use in applications requiring repeated sterilization performance. Typical applications include, but are not limited to: Dental / surgical devices Diagnostics / imaging Fluid and drug delivery devices Orthopedics / prosthetics Scar management Septa / stoppers / laboratory accessories Medical tubing Wound drains and bulbs Sterilization mats Pharmaceutical closures Instrument grips Dialysis o-rings Positioning devices Catheters Seals / o-rings / valves Respiratory / anesthesia Medical equipment keypads

Order this product through the following link:

http://www.lookpolymers.com/polymer_Momentive-Performance-Materials-Silopren-LSR-4020-Liquid-Silicone-Rubber-Healthcare.php

| Physical Properties | Metric | English | Comments |
|-----------------------|-------------|-------------|---|
| Specific Gravity | 1.08 g/cc | 1.08 g/cc | |
| Linear Mold Shrinkage | 0.027 cm/cm | 0.027 in/in | vulcanized 10 sec at 200°C; Without post-cure |
| | 0.035 cm/cm | 0.035 in/in | vulcanized 10 sec at 200°C then post-cured |

| Mechanical Properties | Metric | English | Comments |
|-----------------------|-----------|----------|------------|
| Hardness, Shore A | 22 | 22 | |
| Tensile Strength | 7.00 MPa | 1020 psi | |
| Elongation at Break | 1000 % | 1000 % | |
| Tear Strength | 15.0 kN/m | 85.6 pli | Die B |
| Compression Set | 20 % | 20 % | Post cured |

| Optical Properties | Metric | English | Comments |
|-----------------------|--------|---------|--------------------------------|
| Transmission, Visible | 80 % | 80 % | transparent; thickness unknown |

| Compliance Properties | Metric | English | Comments |
|-----------------------|--------|---------|---|
| FDA | Yes | Yes | FDA Indirect food contact - Rubber articles intended for repeated use - |

| Compliance Properties | Metric | English | FDA Reg 21CFR177.2600 Comments |
|-----------------------|--------|---------|--|
| USP Class VI | Yes | Yes | USP Class VI methods: Intramuscular implantation, intracutaneous injection, & systematic injection |

| Processing Properties | Metric | English | Comments |
|-----------------------|-----------------|----------------|---|
| Nozzle Temperature | 20.0 Â°C | 68.0 Â°F | cool nozzle and cylinder to prevent premature vulcanization |
| Mold Temperature | 140 - 230 Â°C | 284 - 446 Â°F | short vulcanization time required (a few seconds) |
| Injection Pressure | 5.00 - 15.0 MPa | 725 - 2180 psi | depends on feed channel |
| Hold Pressure | 5.00 MPa | 725 psi | |

| Descriptive Properties | Value | Comments |
|------------------------|--------------------------------------|---|
| Appearance | Transparent | |
| BfR | product is compositionally compliant | Recommendation XV Silicones; post cured (4h/200Â°C) |
| European Pharmacopeia | compliant | Eur. Pharmacopeia VI.1.3.2. |

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