Silopren® LSR 7060

Silicone Rubber, LSR

Momentive Performance Materials Inc.

Message:

Silopren LSR 7060 liquid silicone rubber is a two-component, high-transparency, medium-hardness, low-viscosity, fast-cure speed and ultra clear liquid silicone rubber (LSR). Providing good optical clarity, Silopren LSR 7060 liquid silicone rubber combines typical LSR properties, such as high temperature stability and flowability, with excellent UV and blue light stability. As a result, molded lenses produced using this material can exhibit excellent durability and maintain optical clarity, even if exposed to high temperatures or UV light. Due to its high flowability, Silopren LSR 7060 liquid silicone rubber can help enable excellence in manufacturing complex and micro-structure optical lenses, even in large quantities, utilizing the injection and compression molding processes.

Key Features and Typical Benefits

Optical Clarity

Durability

Design Freedom

Productivity

Potential Applications

Interior and exterior lighting - lenses and other illumination optics

Automotive lighting - lenses and light guides

Electronics - Mobile phones, flash lenses, sensing lenses, light guides and other optics

Solar - primary optics for concentrating PVs

| General Information | |
|---------------------|------------------------------------|
| Features | Durable |
| | Fast Cure |
| | Good Color Stability |
| | Good Colorability |
| | Good Crack Resistance |
| | Good Mold Release |
| | Good Processability |
| | Good Thermal Stability |
| | Good UV Resistance |
| | High Clarity |
| | High Flow |
| | High Heat Resistance |
| | Low Viscosity |
| | Medium Hardness |
| | |
| Uses | Automotive Applications |
| | Electrical/Electronic Applications |
| | Lenses |
| | Lighting Applications |
| | Solar Panels |
| | |
| UL File Number | E56745 |
| Appearance | Clear/Transparent |

| Forms | Liquid | | |
|--------------------------------|--------------------------|----------|-------------|
| Processing Method | Compression Molding | | |
| | Injection Molding | | |
| Physical | Nominal Value | Unit | Test Method |
| Density | 1.03 | g/cm³ | JIS K6249 |
| Molding Shrinkage - Flow | 2.1 | % | JIS K6249 |
| Water Absorption (Equilibrium) | < 0.10 | % | ASTM D570 |
| Hardness | Nominal Value | Unit | Test Method |
| Durometer Hardness | | | JIS K6249 |
| Shore A | 60 | | |
| Shore D | 18 | | |
| Elastomers | Nominal Value | Unit | Test Method |
| Tensile Strength | 6.50 | MPa | JIS K6249 |
| Tensile Elongation (Break) | 340 | % | JIS K6249 |
| Tear Strength | 11.0 | kN/m | JIS K6249 |
| Thermal | Nominal Value | Unit | |
| CLTE - Flow (40 to 90°C) | 2.9E-4 | cm/cm/°C | |
| Flammability | Nominal Value | | Test Method |
| Flame Rating | НВ | | UL 94 |
| Optical | Nominal Value | Unit | Test Method |
| Refractive Index | 1.410 | | |
| Transmittance | | | |
| 2000 μm, 400 nm | 93.0 | % | |
| 2000 μm, 700 nm | 94.0 | % | |
| Haze | < 1.0 | % | ASTM D1003 |
| Abbe Number | 50.0 | | |
| Thermoset | Nominal Value | Unit | |
| Thermoset Components | | | |
| Part A | Mix Ratio by Weight: 1.0 | | |
| Part B | Mix Ratio by Weight: 1.0 | | |
| Uncured Properties | Nominal Value | Unit | |
| Color | | | |
| 1 | Clear/Transparent | | |
| 2 | Clear/Transparent | | |
| Viscosity | | | |
| 23°C ³ | 33 | Pa·s | |
| | | | |
| 23°C ⁴ | 46 | Pa·s | |

hr

min

0.25

2900

Curing Time (130°C)

Pot Life (23°C)

NOTE

| 1. | Part B |
|----|--------|
| 2. | Part A |
| 3. | Part B |
| 4. | Mixed |
| 5. | Part A |

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