

Silopren™ LSR 2003

Description

LSR2003 liquid silicone rubber is a two-component product formulated for use in liquid injection molding to produce elastomeric parts where low-durometer is a key requirement. LSR2003 elastomer is clear, but easily pigmentable with Momentive Performance Materials masterbatch colors.

LSR2003 elastomer offers a convenient 1:1 mix ratio and releases easily from molds. Cure time is rapid, generally 10 to 40 seconds at 150°C (302°F) - 204°C (400°F), depending on part size, configuration, and molding temperature.

Key Features and Benefits

LSR2003 liquid silicone rubber is distinguished by the following properties:

- Low-Durometer
- Non-Tackiness
- Sensory Characteristics (Added Cushioning)
- Rapid molding cycle times - > 20-60 seconds
- Convenient 1:1 Mix Ratio

Typical Physical Properties

| <u>Typical properties of the rubber:</u> | | |
|--|--------------------|--------------------|
| | <u>A Component</u> | <u>B Component</u> |
| Appearance | Clear | Clear |
| Application Rate, A / B; gms/minutes | 1554 | 1524 |

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 Cure Rate:
Monsanto Rheometer MDR 2000 @ 177°C or 350°F and Post Cured 2 hrs @ 177°C or 350°F

| | |
|--------------------------|----|
| T-02, seconds | 13 |
| T-90, seconds | 45 |
| Peak Rate, in / lb / min | 10 |
| Max. Torque, in / lb | 2 |

Typical properties of the vulcanizate:

Cured Properties (75 mils thick): Molded 17 mins @ 177°C / 350°F

| | | |
|------------------------|-------------------|------------|
| Density | g/cm ³ | 1.05 |
| Hardness, Shore "00" | Shore "00" | 54 |
| Tensile strength | psi (MPa) | 288 (1.97) |
| Elongation at break | % | 500 |
| Tensile Modulus @ 100% | psi (Mpa) | 30 (0.21) |
| Tear strength, Die B | Lb/in (KN/M) | 23 (4.10) |

Typical data are average data and actual values may vary.

Typical data shall not be used as product specifications

Potential Applications

The combination of low-durometer and non-tackiness allows the product to be used in consumer goods applications such as:

- Corn Pads
- Heel Inserts
- Shoe Insole
- Vibration dampers

Processing Recommendations

Ready-to-use mixtures (of the components A and B) are fed directly to the injection-molding machine from the original containers by means of a metering and mixing unit. The mixture, consisting of the two components in the ratio 1:1, is injected into the heated mold. At mold temperatures of 170 - 230° C, the addition-crosslinking silicone rubber vulcanizes free of dissociation products within a few seconds. High curing speed

and easy de-molding permit fully automated production of large numbers of articles in short cycle times.

Regulatory Compliance

- USP Class VI Compliant

(1) Producer of the final article needs to test and confirm that the final product meets the extraction limits of FDA.

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.

Packaging

LSR2003 is available in 2 x 40 lb pail kits and 2 x 450 lb drum kits.

Patent Status

Standard copy to come

Product Safety, Handling and Storage

Standard copy to come

Limitations

Standard copy to come

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For literature and technical assistance, visit our website at: www.momentive.com

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