

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

Contact Information

Email

commercial.services@momentive.com

Telephone

Americas

+1 800 295 2392

Toll free*

Latin America

Brazil

+55 11 4534 9650

**EMEAI- Europe, Middle
East, Africa & India**

Europe

+390510924300

ASIA PACIFIC

China

800 820 0202

| | | | |
|--------------------------------|--|--|--|
| +704 805 6946 Direct Number | Direct Number | Direct number | Toll free +86 21 3860 4892 Direct number |
| *All American countries | Mexico +52 55 2169 7670 Direct Number | India, Middle East & Africa + 91 44 71212207 Direct number* | Japan +81 3 5544 3111 Direct number |
| | | *All Middle Eastern countries, Africa, India, | Korea +82 2 6201 4600 |

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

DISCLAIMER:

THE MATERIALS, PRODUCTS AND SERVICES OF MOMENTIVE PERFORMANCE MATERIALS INC. AND ITS SUBSIDIARIES AND AFFILIATES (COLLECTIVELY “SUPPLIER”), ARE SOLD SUBJECT TO SUPPLIER’S STANDARD CONDITIONS OF SALE, WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT, PRINTED ON THE BACK OF ORDER ACKNOWLEDGMENTS AND INVOICES, AND AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION, RECOMMENDATIONS, OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SUPPLIER MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING ITS PRODUCTS, MATERIALS, SERVICES, RECOMMENDATIONS OR ADVICE. EXCEPT AS PROVIDED IN SUPPLIER’S STANDARD CONDITIONS OF SALE, SUPPLIER AND ITS REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS OR SERVICES DESCRIBED HEREIN. Each user bears full responsibility for making its own determination as to the suitability of Supplier’s materials, services, recommendations, or advice for its own particular use. Each user must identify and perform all tests and analyses necessary to assure that its finished parts incorporating Supplier’s products, materials, or services will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any

provision of Supplier's standard Conditions of Sale or this Disclaimer, unless any such modification is specifically agreed to in a writing signed by Supplier. No statement contained herein concerning a possible or suggested use of any material, product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Supplier covering such use or design, or as a recommendation for the use of such material, product, service or design in the infringement of any patent or other intellectual property right.

*Silopren™ es una marca comercial de Momentive Performance Materials Inc.

The use of the "™" symbol designates registered or unregistered trademarks of Momentive Performance Materials Inc. or its affiliated companies. Momentive and the Momentive logo are trademarks of Momentive Performance Materials Inc.