

Silopren™ LSR 3366/50

Liquid Silicone Rubber

Description

Silopren LSR 3366/50 is a two-component liquid silicone rubber for injection moulding processes. Silopren LSR 3366/50 shows an excellent aging resistance after long term exposure to high temperatures and retains very good compression set also without post-curing under these conditions.

This material is an excellent candidate to consider for the manufacture of elastomeric articles requiring self-lubricating properties. The self-lubricating effect is achieved by a fluid which exudes out of the vulcanizate over an extended period of time. It typically starts between a few hours and one day after vulcanization.

Key Features and Typical Benefits

Vulcanizates consisting of Silopren LSR 3366/50 liquid silicone rubber are typically distinguished by the following properties:

- ultra-low long-term compression set without post-cure
- self-lubricating properties
- low viscosity
- fast cure
- very high thermal stability
- possible to color

Typical Physical Properties

| | | A-component | B-component |
|------------|--|-------------|-------------|
| Appearance | | White | Whitish |

| | | | |
|--|-----------|-----|-----|
| Fluid content | | 3% | 3% |
| Viscosity, Pa·s $\dot{\gamma} = 10 \text{ s}^{-1}$ at 20°C | DIN 53018 | 350 | 220 |
| The pot-life of the mixture of the two components (closed vessel) at 20°C is three days. Increased temperatures reduce the pot-life. | | | |
| | | | |

| | | | |
|--|------------------------------|-------------------|------|
| <u>Typical properties of the vulcanizate:</u> | | | |
| Mixing ratio of components A : B = 1 : 1. Vulcanization: 10 min at 175°C | | | |
| Density | DIN 53 479 A | g/cm ³ | 1.13 |
| Hardness | DIN 53 505 | Shore A | 52 |
| Tensile strength | DIN 53 504 S2 | N/mm ² | 8.6 |
| Modulus 100% | DIN 53 504 S2 | N/mm ² | 2.2 |
| Modulus 200% | DIN 53 504 S2 | N/mm ² | 3.9 |
| Modulus 300% | DIN 53 504 S2 | N/mm ² | 5.6 |
| Elongation at break | DIN 53 504 S2 | % | 450 |
| Tear strength | ASTM D 624 die B | N/mm | 40 |
| Compression set | DIN 53 517 (22 h at 175°C) | % | 11 |
| Compression set | DIN 53 517 (168 h at 175°C) | % | 18 |
| Compression set | DIN 53 517 (1008 h at 175°C) | % | 31 |
| | | | |

Typical properties are average data and are not to be used as or to develop specifications.

Potential Applications

Because of the outstanding properties, Silopren LSR 3366/50 liquid silicone rubber is an excellent candidate to consider for use in wire harness applications for the following elastomeric articles:

- single wire seals
- peripheral / radial seals

Processing Considerations

Ready-to-use mixtures (of the components A and B) are typically fed directly to the injection-molding machine from the original drums 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-curable silicone rubber usually cures within a few seconds. The curing process does not generate splitting products. High curing speed and easy demolding can help enable fully automated production of large numbers of articles in short cycle times. Silopren LSR 3366/50 liquid silicone rubber contains 3 % of a special silicone fluid, which migrates to the surface of the molded part over time and provides a self-lubricating effect. This process, however, is affected by several factors, which are specific for each part and depend upon:

- ratio of volume to surface area
- type and concentration of pigment added
- storage time and temperature during storage

Silopren LSR 3366/50 liquid silicone rubber should only be used for the production of technical articles. For further information please contact Momentive Performance Materials Inc.

Packaging

Silopren LSR 3366/50 liquid silicone rubber is available in 2x20kg pail kits and 2x200kg drum kits.

Compliance

Silopren LSR 3366/50 liquid silicone rubber is not compositionally compliant with 21 CFR §177.2600.

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.

Product Safety, Handling and Storage

Customers should review the latest Safety Data Sheet (SDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, emergency service contact information, and any special storage conditions required for safety. Momentive Performance Materials (MPM) maintains an around-the-clock emergency service for its products. SDS are available at www.momentive.com or, upon request, from any MPM representative. For product storage and handling procedures to maintain the product quality within our stated specifications, please review Certificates of Analysis, which are available in the Order Center. Use of other materials in conjunction with MPM products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

Limitations

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

Contact Information

Email

commercial.services@momentive.com

Telephone

| Americas | Latin America | EMEAI- Europe, Middle East, Africa & India | ASIA PACIFIC |
|-------------------------|----------------------|---|---------------------|
| +1 800 295 2392 | Brazil | Europe | China |
| Toll free* | +55 11 4534 9650 | +390510924300 | 800 820 0202 |
| +704 805 6946 | Direct Number | Direct number | Toll free |
| Direct Number | | | +86 21 3860 4892 |
| | | | Direct number |
| *All American countries | Mexico | India, Middle East & Africa | Japan |
| | +52 55 2169 7670 | + 91 44 71212207 | +81 3 5544 3111 |
| | Direct Number | Direct number* | 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™是 Momentive Performance Materials Inc. 的商标

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.