

Technical Data Sheet

Silopren[™] LSR 4050 Silopren^{*} LSR 4050

Description

Silopren LSR 4050 is a two-component liquid silicone rubber for injection processes. Silopren LSR 4050 can be used to produce medical technical articles with high transparency and excellent rubber elastic properties.

Key Features and Benefits

Vulcanisates consisting of Silopren LSR 4050 are distinguished by the following properties:

- Excellent biocompatibility
- High stability to ozone and ultraviolet light
- Neutral odor and taste
- Sterilisable with ethylene oxide, steam and gamma radiation
- Good transparency
- High thermal stability
- High recovery after puncture
- Easy pigmentable with the LSR Colour Pastes

Typical Physical Properties

| Typical properties of the rubber: | | | | |
|-----------------------------------|--|-------------|-------------|--|
| | | A-part | B-part | |
| Appearance | | translucent | translucent | |

| Viscosity in Pa.s gamma = 10 s-1 at 20 ° C | DIN 53018 | 600 | 600 |
|--|-----------|-----|-----|
|--|-----------|-----|-----|

The pot-life of the mixture of the two components (closed vessel) at 20 $^{\circ}$ C is three days. Increased temperatures reduce the pot-life.

| Typical properties of the vulca Mixing ratio of componer | | | |
|---|--|-------------------|------|
| Vulcanisation: 10 min. 17 | ′5 °C + 4 hrs. 200 °C post cure | | |
| Density | DIN 53 479 A | g/cm ³ | 1.12 |
| Shore A hardness | DIN 53 505 | | 51 |
| Tensile strength | DIN 53 504 S2 | N/mm ² | 10 |
| Elongation at break | DIN 53 504 S2 | % | 600 |
| Tear strength | ASTM D 624 die B | N/mm | 35 |
| Compression set | DIN 53 517 (22 h at 175 ° C) | % | 25 |

Potential Applications

Because of the outstanding properties Silopren LSR 4050 is particularly suitable for the following elastomeric articles: sealing elements, diaphragms, ear plugs, bellows, respiratory devices, vibration dampers, pipette nipples, tube connectors, catheters, parts for medical technical equipment, mats s.o.

Regulatory Compilance

• A representative sample of an analogous product to Silopren LSR 450 met the requirements of USP Class VI (maximum contact time with human tissue 28 days) and ISO 10993 under Good Laboratory Practices (GLP).

- The ingredients are listed in the BfR recommendation XV "Silicones" (1)
- Compositionally compliant with 21 CFR 177.2600 Rubber articles intended for repeated use⁽²⁾

• Tested according Eur. Pharmacopia VI 3.1.9

(1) Producer of the final article needs to test and confirm that the final product meets the extraction limits of BfR XV or corresponding EU legislation.

(2) 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.

Patent Status

本書のいかなる内容も、関連特許が存在しないことを暗示したものではありません。またいか なる特許についても、その権利者による許可なしに、その特許が対象とする発明を実施する ための許可、誘因または推奨を構成することはできません。

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 aroundthe-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 | ASIA PACIFIC |
| | | East, Africa & India | |
| +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 | Mexico | India, Middle East & | Japan |
| countries | +52 55 2169 7670 | Africa | +81 3 5544 3111 |
| | Direct Number | + 91 44 71212207 | Direct number |
| | | Direct number* | |
| | | *All Middle Eastern | Korea |
| | | countries, Africa, India, | +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™は Momentive Performance Materials Inc. の商標です。

The use of the "TM" 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.