

# Silopren™ LSR 4640

Silopren\* LSR 4640

## Description

LSR 4640 is a two-component liquid silicone rubber for injection moulding processes. The material performance is particularly characterised by high reactivity, low viscosity and high tear strength. The LSR 4640 enables particularly the production of parts for healthcare devices covering by USP Class VI such as sealing elements, O-rings, diaphragms, ear plugs, bellows, baby teats, respiratory devices, air vent flaps, tube connectors, catheters and mats.

## Key Features and Benefits

Vulcanisates consisting of LSR 4640 are distinguished by the following properties:

- Low viscosity
- Fast cure
- High tear strength
- Sterilisable with ethylene oxide, steam and gamma radiation
- Long service life at dynamic stress
- Neutral odour and taste
- High recovery after puncture
- High temperature stability
- compliance with US Pharmacopoeia XXIII, Class VI (maximum contact time with human tissue 28 days)

## Typical Physical Properties

Typical properties of the rubber:			
		A-part	B-part

Appearance		translucent	translucent
Viscosity in Pa.s $\gamma = 10 \text{ s}^{-1}$ at 20 ° C	DIN 53018	350	350
The pot-life of the mixture of the two components (closed vessel) at 20 ° C is <b>three days. Increased temperatures reduce the pot-life.</b>			

Typical properties of the vulcanisate: Mixing ratio of components A: B = 1: 1. Vulcanisation: 10 min. 175 °C + 4 hrs. 200 °C post cure			
Density	DIN 53 479 A	g/cm <sup>3</sup>	1.12
Shore A hardness	DIN 53 505		42
Tensile strength	DIN 53 504 S2	N/mm <sup>2</sup>	8.0
Elongation at break	DIN 53 504 S2	%	600
Tear strength	ASTM D 624 die B	N/mm	45
Compression set	DIN 53 517 (22 h at 175 ° C)	%	25

## Regulatory Compliance

- A representative sample of an analogous product to Silopren LSR 4640 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” <sup>(1)</sup>
- Compositionally compliant with 21 CFR 177.2600 – Rubber articles intended for repeated use<sup>(2)</sup>
- 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

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](http://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.

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