

# Silopren™ LSR 4020

## Product Description

Silopren LSR 4020 is a two-component liquid silicone rubber for injection molding processes suitable for the production of parts for healthcare devices such as variety of molded fluid and drug delivery device components, respiratory masks, sterilization mats, diaphragms, o-rings and infant care applications.

## Key Features and Typical Benefits

- Excellent processing
- Biocompatibility USP CLASS VI and ISO 10993 (parts 5, 6, 10, 11)
- High stability to ozone and ultraviolet light
- Neutral odor and taste
- Sterilizable with ethylene oxide, steam and gamma radiation
- Good transparency
- High thermal stability
- High recovery after puncture

## 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	200	200
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 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>	1.08
Shore A hardness	DIN 53 505		22
Tensile strength	DIN 53 504 S2	N/mm <sup>2</sup>	7
Elongation at break	DIN 53 504 S2	%	1000
Tear strength	ASTM D 624 die B	N/mm	15
Compression set (22 h at 175 °C)	DIN 53 517	%	20

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

## Regulatory Compliance

- A representative sample of Silopren LSR 4020 met the requirements of USP Class VI (maximum contact time with human tissue 29 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>

<sup>(1)</sup> 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.

<sup>(2)</sup> 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.

## 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 typically vulcanizes, without any dissociation products, within a few seconds. High curing speed and easy demolding can help enable fully automated production of a large number of articles in short cycle times.

## 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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