

Silopren™ LSR 4640

Product Description

Silopren LSR 4640 is a two-component liquid silicone rubber for injection molding processes. The material processing performance is particularly characterized by high reactivity and low viscosity. Silopren LSR 4640 is a high tear strength silicone rubber, 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

- High reactivity, lower viscosity, shorter cycle time
- Excellent thermal stability
- Biocompatible USP CLASS VI and ISO 10993 (parts 5, 6, 10, 11)
- Sterilizable with ethylene oxide, steam and gamma radiation
- Long service life at dynamic stress
- High stability to ozone and ultraviolet light
- Low cyclic content

Typical Physical Properties

Typical properties of the rubber:			
		A-part	B-part
Appearance		translucent	translucent
Viscosity in Pas $\gamma = 10 \text{ s}^{-1}$ at 20 ° C	DIN 53018	320	290
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			
Density	DIN 53 479 A	g/cm ³	1.11
Shore A hardness	DIN 53 505		41
Tensile strength	DIN 53 504 S2	N/mm ²	8.5
Elongation at break	DIN 53 504 S2	%	770
Tear strength	ASTM D 624 die B	N/mm	30

Compression set	DIN 53 517 (22 h at 125 ° C)	%	6
Compression set	DIN 53 517 (22 h at 175 ° C)	%	48
Weight loss BfR*		%	0.5
Vulcanisation: 10 min. 175 °C, 4h 200°C			
Density	DIN 53 479 A	g/cm ³	1.11
Shore A hardness	DIN 53 505		42
Tensile strength	DIN 53 504 S2	N/mm ²	9.3
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 125 ° C)	%	3
Compression set	DIN 53 517 (22 h at 175 ° C)	%	28
Weight loss BfR*		%	0.15

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

BfR recommendation XV. Silicones (Ed. Oct 2025) referenced test method

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 29 days) and ISO 10993 under Good Laboratory Practices (GLP).
- The ingredients are listed in the BfR recommendation XV “Silicones” and LII “Fillers”
- Compositionally compliant with 21 CFR 177.2600 – Rubber articles intended for repeated use

More information is available on request.

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.

General Considerations for Use

Due to versatile applications potential, usage is typically determined by the customer’s specific formulations and requirements.

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 MyMomentive™ Order Management Site. 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 respective applications.

Regulatory Compliance

Please Contact commercial.services@momentive.com to request regulatory and compliance information.

Technical Services

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