

Silopren™ LSR 3696/25

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Liquid Silicone Rubber

Description

Silopren LSR 3696/25 liquid silicone rubber is a two-component liquid silicone rubber for injection moulding processes. 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. **Silopren LSR 3696/25** liquid silicone rubber shows an excellent compression set after vulcanization without post-curing.

Key Features and Typical Benefits

Vulcanizates consisting of **Silopren LSR 3696/25** liquid silicone rubber are typically distinguished by the following properties:

- ultra-low compression set without post-cure
- self-lubricating properties
- low viscosity
- fast cure
- low modulus
- high thermal stability
- increased crack resistance
- outstanding resistance to aging
- easy to color

Typical Physical Properties

| | | | | |
|---|--|--|---------------|---------------|
| Typical properties of the uncured material: | | | | |
| | | | A-Part | B-Part |

| | | | | |
|--|------------|------------------|-------------------|---------|
| Appearance | | | whitish | whitish |
| Fluid Content | | % | 6 | 6 |
| Viscosity $\gamma=10s^{-1}$ at 20°C | DIN 53 018 | Pa·s | 270 | 300 |
| The pot-life of the mixture of the two components (closed vessel) at 20 degrees Celsius is three days. Increased temperatures reduce the pot-life. <u>Typical properties of Silopren LSR 3696/25 liquid silicone rubber:</u> Mixing ratio of components A:B=1:1. Vulcanization: 10 min. at 175°C | | | | |
| Density | | DIN 53 479 A | g/cm ³ | 1.08 |
| Hardness | | DIN 53 505 | Shore A | 24 |
| Modulus 50% | | DIN 53 504 S2 | N/mm ² | 0.3 |
| Modulus 100% | | DIN 53 504 S2 | N/mm ² | 0.5 |
| Modulus 200% | | DIN 53 504 S2 | N/mm ² | 1 |
| Modulus 300% | | DIN 53 504 S2 | N/mm ² | 1.5 |
| Tensile strength | | DIN 53 504 S2 | N/mm ² | 6.5 |
| Elongation at break | | DIN 53 504 S2 | % | 710 |
| Tear strength | | ASTM D 624 die B | N/mm | 12 |
| Compression set (22h/175°C) | | DIN ISO 815 | % | 19 |

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

Potential Applications

Because of the outstanding properties, **Silopren LSR 3696/25** liquid silicone rubber is an excellent candidate to consider for use in wire harness applications for the following elastomeric articles:

- cable seals
- mat seals
- grommets
- gaskets
- plug 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 degrees Celsius, 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 3696/25** liquid silicone rubber contains 6 percent 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 3696/25 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 3696/25 liquid silicone rubber is available in 2x20kg pail kits and 2x200kg drum kits.

Patent Status

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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.

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For literature and technical assistance, visit our website at: www.momentive.com

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