

FSL 7641

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Fluorinated Liquid Silicone Rubber

Description:

FSL 7641 is a two-component fluorinated liquid silicone rubber for injection molding processes. This material is an excellent candidate to consider for the manufacturing of elastomeric articles exposed to lubricants, fuels and solvents. Compared to standard liquid silicone rubbers without fluorine content, the resistance of FSL 7641 fluorinated liquid silicone rubber to oil and fuel is much better.

Key Features and Typical Benefits:

Vulcanizates consisting of FSL 7641 fluorinated liquid silicone rubber are typically distinguished by the following properties:

- Improved resistance to oils
- Balanced fluid and solvent resistance
- Low compression set without post-cure
- Fast cure
- High thermal stability
- High stability and flexibility at low temperatures
- Outstanding resistance to aging
- Easy to color

Typical Physical Properties:

| | | A-part | B-part |
|--------------------|------------|-------------|-------------|
| Appearance | | Translucent | Translucent |
| Viscosity in Pa•s, | DIN 53 018 | 790 | 700 |

| | | | |
|---|------------------|-------------------|------|
| $\dot{\gamma}=10s^{-1}$ at 20°C | | | |
| Mixing Ratio of Components A:B=1:1, Vulcanization conditions: 10 min/175°C, post-curing 4h/200°C in hot air | | | |
| Density | DIN 53 479 A | g/cm ³ | 1.23 |
| Hardness | DIN 53 505 | Shore A | 38 |
| Tensile Strength | DIN 53 504 S2 | MPa | 8.5 |
| Elongation at Break | DIN 53 504 S2 | % | 590 |
| Tear Strength | ASTM D 624 die B | N/mm | 24 |
| Compression Set (22h/175°C) | DIN ISO 815 | % | 18 |

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

Potential Applications:

Because of its outstanding properties, FSL 7641 fluorinated liquid silicone rubber is an excellent candidate to consider for use in the following elastomeric articles:

- O-Rings
- Seals and Gaskets
- Membranes
- Mold-Making
- Air-Intake Flaps and other 2-Component Parts (application of appropriate bonding agent necessary to bond to plastic substrates)

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 pot-life of the mixture of the two components (closed vessel) at 20°C is typically three days. 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-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. FSL 7641 fluorinated liquid silicone rubber should only be used for the production of technical

articles. For further information please contact Momentive Performance Materials.

Packaging:

FSL 7641 fluorinated liquid silicone rubber is available in 2x20kg pail kits.

Compliance:

FSL 7641 fluorinated liquid silicone rubber is not compositionally compliant with 21 CFR §177.2600.

Storage:

Correctly stored in its original unopened container at room temperature (max 27°C), FSL 7641 fluorinated liquid silicone rubber has a shelf life of 540 days from the date of manufacturing. Please check use-before/expiry date on product label and certificate. Containers which have been opened must be kept tightly closed afterwards.

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 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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