

LUMISIL LR 7601/70 A/B

Product description

Liquid silicone rubbers of the LUMISIL® LR 7601 series are paste-like, two component compounds with short curing times. The vulcanizates are noted for their very high optical transparency and excellent mechanical and electrical properties.

Properties

The products can be used at temperatures down to -55 °C and even above +150 °C. The outstanding optical transparency extends over a broad range of the visible spectrum and exceeds the transparency of polycarbonate or polymethylmethacrylate. The refractive index $n_{D_{25}}$ is in the range of 1.41.

LUMISIL LR 7601/70 A/B is optimized for state-of-the-art requirements of optical parts.

In contrast to standard ELASTOSIL® LR grades, the hardness in the product name of LUMISIL LR 7601/70 A/B reflects the hardness of vulcanized articles in the non-post cured state. Depending on the injection molding parameters, the geometry of the final parts and the post curing conditions, hardness increases after post curing in the range of 5 to 8 points.

Application

These grades are particularly suitable for the economical production of large series of injection moulded articles with excellent optical transparency. Parts made from LUMISIL LR 7601/70 A/B can be used for technical applications. These articles are also suitable for use in conjunction with foodstuffs.

Postcured parts can be used for food contact applications and are suitable for use under the Recommendation "XV. Silicones" of the BfR and FDA § 177.2600 under observance of any given limitations on extractable and volatile substances.

Please note that the product contains low levels (<0.1%) of residual hydrocarbons which have to be removed from the finished food contact article.

Processing

The A and B components are delivered ready to use in 20 and 200 litre drums. With adequate metering equipment, they can be pumped directly from the original containers into the injection molding machine and mixed by a static mixer.

The mixing ratio is 1 : 1. At room temperature, mixtures of A and B components have a pot life of at least three days.

For maximum transmission and transparency of injection molded parts, any cross contamination with standard silicones have to be avoided. Therefore, we recommend producing LUMISIL® LR 7601 series with a separate line. Additionally, processing parameters like injection speed, holding pressure have to be adapted to the corresponding viscosities of the LUMISIL® LR 7601 series to guarantee exact filling and de-aeration of cavities.

Compared to ELASTOSIL® LR, LUMISIL® LR 7601 series have less mechanical strength. This has to be taken into consideration for the demoulding process, a high shear on parts is not recommended. Demoulding technologies like mushroom ejectors or blowing-off by support of air pressure have been tested successfully.

Polygone® 505 is suitable to remove deposits or residues on sensitive mold surfaces. The use of an ultrasonic bath supports a careful cleaning without attacking the surface. It is recommended to use WACKER® Silicon spray in the initial phase of the injection molding process.

For detailed information refer to our brochure "SOLID AND LIQUID SILICONE RUBBER - MATERIAL AND PROCESSING GUIDELINES".

Storage

The 'Best use before end' date of each batch is shown on the product label.

Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality

assurance reasons.

corresponding Material Safety Data Sheets. They are available on request from WACKER subsidiaries or may be printed via WACKER web site <http://www.wacker.com>.

Safety notes

Comprehensive instructions are given in the

Product data

Typical general characteristics	Inspection Method	Value
Hardness Shore A	DIN 53505	70
Appearance and color		high transparent
Density	ISO 1183-1 A	1,05 g/cm ³
Viscosity (shear rate 1 s ⁻¹)	DIN 53019	55000 mPa s
Viscosity (shear rate 10 s ⁻¹)	DIN 53019	48000 mPa s
Tensile strength	DIN 53504 S 1	9,0 N/mm ²
Elongation at break	DIN 53504 S 1	90 %
Tear strength	ASTM D 624 B	10 N/mm

These figures are only intended as a guide and should not be used in preparing specifications.

The data presented in this medium are in accordance with the present state of our knowledge but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this medium should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The information provided by us does not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the product for a particular purpose.

The management system has been certified according to DIN EN ISO 9001 and DIN EN ISO 14001

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For technical, quality, or product safety questions, please contact:

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