

ELASTOSIL® LR 3003/50 A/B

LIQUID SILICONE RUBBER

Product description

Liquid silicone rubbers of the ELASTOSIL® LR 3003 series are paste-like, easily-pigmentable two-component compounds with short curing times. Their vulcanizates are noted for their high transparency and excellent mechanical and electrical properties.

Properties

Narrow Shore hardness range from 47 to 53 Shore A (50 ± 3 Shore A).

The products can be used within a temperature range of - 55 °C to + 210 °C.

The addition of heat stabilizers at service temperatures of more than 180 °C is recommended. Further information to improve the heat stability by use of specific ELASTOSIL® FL Color Pastes can be obtained from the Technical Information Sheet "ELASTOSIL® FL Color Pastes".

Application

These grades are particularly suitable for the economical production of large series of injection-moulded articles.

Parts made from ELASTOSIL® LR 3003/50 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.

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 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.

Safety notes

Comprehensive instructions are given in the 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>.

Product data

Typical general characteristics	Inspection Method	Value
Hardness Shore A	DIN 53505	50
Appearance		transparent
Density	ISO 1183-1 A	1,13 g/cm ³
Viscosity (shear rate 0.9 s ⁻¹)	DIN 53019	912000 mPa s
Viscosity (shear rate 10 s ⁻¹)	DIN 53019	370000 mPa s
Tensile strength	DIN 53504 S 1	9,90 N/mm ²
Elongation at break	DIN 53504 S 1	480 %
Tear strength	ASTM D 624 B	29 N/mm
Rebound resilience	DIN 53512	62 %
Compression set *	DIN ISO 815-B (22 h / 175 °C)	13 %
Dielectric strength (1-mm-sheet)	DIN IEC 243-2	23 kV/mm
Volume resistivity	DIN IEC 93	5 x 10 ¹⁵ Ω cm
Dielectric constant at 50 Hz	DIN VDE 0303	2,8 ε _r
Dissipation factor (50 Hz)	DIN VDE 0303	20 x 10 ⁻⁴ tan δ

Cure conditions: 5 min / 165 °C in press; postcuring for 4 h / 200 °C in ventilated air.

* Postcuring for CS: 6 h / 200 °C

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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