ELASTOSIL® LR 3003/50 A/B

ELASTOSIL®

Liquid Silicone Rubber (LSR)

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). This product 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® Color Pastes FL can be obtained from the Technical Information Sheet "ELASTOSIL® Color Pastes FL".

Specific features

- Food-contact
- General purpose
- Reduced volatile content

Technical data

Properties Uncured

Property	Condition	Value	Method
Viscosity, dynamic (1 s^{-1})	-	1100000 mPa·s	DIN EN ISO 3219
Viscosity, dynamic (10 s^{-1})	-	410000 mPa·s	DIN EN ISO 3219

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

Properties Cured

Cure conditions: 5 min / 165 °C in press, post-cured 4 h / 200 °C

Property	Condition	Value	Method
Appearance	-	transparent	-
Tear strength	-	28 N/mm	ASTM D 624 B
Hardness Shore A	-	50	DIN ISO 48-4
Density	-	1.13 g/cm^3	DIN EN ISO 1183-1 A
Tensile strength	-	10.3 N/mm^2	ISO 37 type 1
Elongation at break	-	490 %	ISO 37 type 1
Compression Set[(1)]	22 h | 175 °C	13 %	DIN ISO 815-1 type B method A
Volume resistivity	-	5 x 10^{15} Ohmcm	IEC 62631-3-1
Permittivity	50 Hz	2.8	IEC 62631-2-1
Dissipation factor	50 Hz	20 x 10^{-4} tan δ	IEC 62631-2-1
Dielectric strength (1-mm-sheet)	-	23 kV/mm	IEC 60243-1
Rebound resilience	-	62 %	ISO 4662

[1]post-cured 6 h / 200 °C

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Applications

- Baby Care
- Battery

- Cable Accessories
- Connector Seals
- Dairy Applications
- General Automotive Parts
- Household Applications
- Molded Parts
- Molded Seals (LSR)
- Sanitary
- Sleevings
- Vibration Dampers

Application details

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 kg pail and 200 kg drum kits. 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".

Packaging and storage

Packaging

This product is available in 20 kg pail and 200 kg drum kits.

Storage

Once opened, containers should always be resealed after use to prevent the platinum catalyst from being poisoned by amines, sulphur or phosphorus compounds. 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.

QR Code ELASTOSIL® LR 3003/50 A/B

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

Wacker Chemie AG, Hanns-Seidel-Platz 4, 81737 Munich, Germany
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WACKER

Regulatory Product Information

ELASTOSIL® LR 3003/50 A/B

RoHS (Restriction of Hazardous Substances)

None of the substances mentioned in Directive 2015/863/EU (RoHS) are intentionally introduced. Therefore they are not expected to be present in amounts exceeding the defined limit values.

WEEE (Waste of Electrical and Electronic Equipment)

None of the substances mentioned in Directive 2012/19/EU (WEEE) are intentionally introduced during manufacture. Therefore they are not expected to be present except for trace amounts from incidental environmental contamination. Analytical data is not available.

Heavy Metals

- Directive 94/62/EC (Packaging and packaging waste)
- CONEG (Coalition of Northeastern Governors)
- Directive 2000/53/EC (End-of life vehicles)

None of the substances concerned (lead, chromium VI, cadmium, mercury) are intentionally introduced. Therefore they are not expected to be present except for trace amounts from incidental environmental contamination. Analytical data is not available.

REACH SVHC (Substances of Very High Concern)

Please see Safety Data Sheet.

Allergens

- Regulation (EU) No 1169/2011, substances listed in Annex II
- Substances listed in the Food Allergen Labeling and Consumer Protection Act (FALCPA)
- Latex
- Fragrances

The substance(s) mentioned above are not used in the manufacture or the formulation of this product.

WACKER

GMO (Genetically Modified Organisms)

Product is not derived from genetically modified organisms and for its manufacture no intermediates and/or auxiliary agents which are genetically modified are used.

BSE/TSE

The product is not derived from human or animal origin and for its manufacture no intermediates and/or auxiliary agents which are of human or animal origin are used.

Food Contact Regulations

Europe

- Regulation (EC) No 1935/2004

Provided appropriate processing, the product is suitable for the manufacture of food contact materials and articles according to article 3 of this Regulation, insofar as it is of suitable purity and not hazardous according to European classification and labelling requirements.
Compliance with the requirements of Regulation (EC) No 1935/2004, especially the suitability of the material or article for the intended use, the observance of any given limitations, the effect on taste and smell of the food has to be ensured by the producer of the finished food contact material or article as it is placed on the market.

- Regulation (EU) No 10/2011

Not applicable. Silicones are exempted from this Regulation.

- Regulation (EC) No 2023/2006

Not applicable. This product is considered as a starting material and therefore out of the scope of this Regulation.

Germany

- Recommendation of the BfR XV. Silicones

The ingredient(s) of this product are in compliance. Limitation(s): Volatiles max. 0.5%. Extractable substances: max. 0.5%.

France

- Arrêté du 25 novembre 1992

The ingredient(s) of this product are in compliance. Limitation(s): Overall migration from the final article may not exceed 10 mg/dm² or 60 mg/kg. Volatiles max. 0.5%.

Spain

- Royal Decree 847 of July 2011

The ingredient(s) of this product are in compliance. Limitation(s): Overall migration from the final article may not exceed 10 mg/dm² or 60 mg/kg.

Switzerland

- Swiss Ordinance SR 817.023.21

The ingredients of the product are listed in annex 9.

USA

The product is suitable for use under the following section(s) of Title 21 of the Code of Federal Regulations and those which refer to these:

- §177.2600 RUBBER ARTICLES INTENDED FOR REPEATED USE; Extraction limits must be met on the finished article per 177.2600 (e) & (f).
- §175.300 RESINOUS AND POLYMERIC COATINGS; Extractive limits under (c) - (e) on finished article

China

- Standard GB 9685-2016

The contained additives are listed in table A.3 or A.7 for rubber or silicone rubber, respectively. The platinum catalyst is considered as NIAS for which a migration limit of 0.01 mg/kg food or food simulant applies.

- Standard GB 4806.11-2016

The siloxane based starting substances are listed in Table A.2.

- Standard GB 4806.1-2016 General safety requirements

The product meets all applicable requirements of this Standard insofar as it is not classified as hazardous to human health according to the European classification and labelling requirements.

Brazil/Mercosur States

- The base polymers are in compliance with the positive list of starting materials for the manufacture of silicone elastomers under RDC N° 123 of June 19, 2001.
- The base polymers and fillers are listed in RDC N° 56 of 2012 and/or GMC RES N° 28/99.

Overall migration from the finished article may not exceed 8 mg/dm² or 50 mg/kg food.

Please note:

- Unless otherwise stated, no additives/components with an SML are used.

Regulatory sanctioning of the ingredients in a product does not imply that the finished product manufactured from those ingredients is considered safe for contact with food by regulatory bodies. The responsibility for compliance of the finished article and any testing requirements relating to migration, extraction or volatile limits resides with the manufacturer of the finished product.

Pharmaceutical Regulations

European Regulations

Provided appropriate processing this product successfully passed the following tests according to the European Pharmacopoeia section 3.1.9 Silicon Elastomer for Closures and Tubing:

- Reducing substances
- Substances soluble in hexane
- Volatile matter

This information must not be considered a specification as it is not part of our regular quality control.

Residual solvents
None of the solvents either mentioned in Guideline for residual solvents (CPMP/ICH/283/95) of the current edition of European Pharmacopoeia or in US Pharmacopeia Section 467 are intentionally introduced.

Toy Regulations

- DIN EN 71-3

Substances mentioned in DIN EN 71-3:2019, table 2 are not intentionally introduced. Therefore they are not expected to be present except for trace amounts from incidental environmental contamination. Analytical data is not available.

- DIN EN 71-9

Substances mentioned in DIN EN 71-9:2007, tables 2A – 2I are not intentionally introduced. Therefore they are not expected to be present except for trace amounts from incidental environmental contamination. Analytical data is not available.

- CPSIA (Consumer Product Safety Improvement Act) of 2008

None of the substances concerned (lead, phthalates) are intentionally introduced. Therefore they are not expected to be present except for trace amounts from incidental environmental contamination. Analytical data is not available.

Substances

- PAH (Polycyclic aromatic hydrocarbons)
- DMF (Dimethylfumarate)
- APEO (Alkylphenol ethoxylates)
- Phthalates
- Azo compounds
- PCDD/PCDF (Polychlorinated dibenzodioxins and dibenzofurans)
- Asbestos
- Melamine
- BPA (Bisphenol A), BPS (Bisphenol S)
- Radioactive substances
- PFOS (Perfluorooctane sulfonate), PFOA (Perfluorooctanoic acid)
- POP (Persistent organic pollutants) as defined in Regulation (EU) 2019/1021 (Stockholm Convention)
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- Conflict minerals as defined in section 1502(e)(4) of H.R. 4173, of the Wall Street Reform and Consumer Protection Act

- ODS (Ozone Depleting Substances) as mentioned in Regulation (EC) No 1005/2009
- SCCP (Short-chain chlorinated paraffins)

The substances mentioned above are not intentionally introduced. Therefore they are not expected to be present except for trace amounts from incidental environmental contamination. Analytical data is not available.

Irradiation

Product does not undergo any form of radiation treatment.

Chemical Inventory Status

See Safety Data Sheet.

Certificates

Available Certificates can be downloaded via
https://www.wacker.com/cms/de/wacker_group/wacker_facts/ims/certificates/certificates.jsp

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For questions relating to this data sheet, please contact:
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