

ELASTOSIL® M 4503

RTV-2 SILICONE RUBBER / MOLD MAKING

Product description

Pourable, condensation-curing, two-component silicone rubber that vulcanizes at room temperature.

Special features

- good flow
- low Shore A hardness (approx. 25)
- high tear strength
- great extensibility and elasticity
- excellent long-term stability of the mechanical properties of the vulcanizate
- high resistance to casting resins, particularly polyesters

Application

Due to its good mechanical properties of the cured material as well as its high resistance to polyester resins, ELASTOSIL® M 4503 is particularly suitable as a mold-making material for reproducing models with very pronounced undercuts in polyester resins.

Other materials, such as plaster or wax, may also be cast without any problems from molds made of ELASTOSIL® M 4503.

Processing

ELASTOSIL® M 4503 is cured by adding 5 wt % Catalyst T35

Pot life curing time may be accelerated, and thus adjusted to suit the individual application by blending with Catalyst T47.

The pot life is the period of time at 23 °C / 50% rel. humidity during which the catalyzed mix to attain a viscosity of 100000 mPa s and still be just pourable.

For faster curing Catalyst T 35 may be blended with Catalyst T 47. E.g. at a ratio of 95 : 5 (T35 : T47) the pot life decreases to about 30 min, and the mold needs only about 4 h to cure.

Further instructions on blending any catalyst with Catalyst T 47 may be found in our data-sheet: "WACKER® T-series catalysts".

Comprehensive instructions are given in our leaflet "ELASTOSIL® - PROCESSING RTV-2 SILICONE RUBBERS".

Detailed information on other mold-making compounds in the ELASTOSIL® M range is contained in our brochure "ELASTOSIL® M. Mold-Making Compounds For Maximum Precision".

Catalyst	Pot life, approx. [min]	Curing time (tack-free), approx. [h]
5 % T 35	90	15-20

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.

Additional information

Please visit our website www.wacker.com.

Safety notes

Being a condensation-curing silicone rubber, ELASTOSIL® M 4503 contains only constituents that over many years have proved to be neither toxic nor aggressive. Special handling precautions are therefore not required, i.e., only the general industrial hygiene regulations apply.

Catalysts T 35 and T 47 contain a tetraorganotin compound, are flammable (flash points 50 °C and 34 °C respectively) and may cause irritation in contact with eyes and skin. Adequate protective measures are required.

<http://www.wacker.com>.

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

Product data

Typical general characteristics	Inspection Method	Value
Product data (uncured)		
Color		white
Density at 20 °C, at 1013 hPa	DIN 53217	approx. 1,16 g/cm ³
Viscosity, dynamic at 23 °C	BROOKFIELD	40000 - 60000 mPa.s
Product data (catalyzed with 5 wt % Catalyst T 35 or T 46)		
Viscosity at 23 °C	ISO 3219	40000 mPa s
Product data (cured)		
Density at 23 °C in water	ISO 2781	1,16 g/cm ³
Hardness Shore A	ISO 868	25
Tensile strength	ISO 37	5,00 N/mm ²
Elongation at break	ISO 37	350 %
Tear strength	ASTM D 624 B	> 20 N/mm
Linear shrinkage		0,5 %

With 5 wt % Catalyst T 35, after 7 days at 23 °C / 50 % rel. humidity.

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

The data presented in this leaflet 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 leaflet 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 recommendations do 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 products 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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