

Kirkside Products

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Elastosil M4503

RTV-2 Silicone Rubber

Characteristics

Pourable, condensation-curing, two-component silicone rubber that vulcanizes at room temperature and 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
- Outstanding resistance to common casting resins, particularly polyesters

Applications

Due to the excellent mechanical properties of the cured material as well as its outstanding resistance to casting resins, particularly polyester resins, ELASTOSIL M4503 is especially suitable for reproducing models with extensive undercuts in casting resins.

Other matter, such as wax and plaster, may be cast without any problems in moulds made from ELASTOSIL M4503.

Product data

Uncured

Colour			White
Density at 23°C		[g/cm ³]	1.17
Viscosity at 23°C	Brookfield	[mPa s]	45 000

With 5 wt % Catalyst T35 or T46

Viscosity at 23°C	Brookfield	[mPa s]	40 000
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Cured

With 5 wt % Catalyst T35, after 7 days at 23°C / 50% rel. humidity

Density at 23°C, in water	ISO 2 781	[g/cm ³]	1.16
Hardness Shore A	ISO 867		25
Tensile strength	ISI 37	[N/mm ²]	5.0
Elongation at break	ISO 37	[%]	350
Tear strength	ASTM C 624, B	[N/mm]	≥ 20
Linear shrinkage		[%]	0.5
Coefficient of linear expansion	0-150°C	[m/m K]	2.0 x 10 ⁻⁴

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

Storage stability

ELASTOSIL M4503 has a shelf life of at least 12 months if stored in the sealed original containers between 5°C and 30°C. The ‘Best use before end’ date of each lot is shown on the product label.

Catalysts T35 and T46 have shelf lives of at least 12 months if stored in tightly closed bottles between 5°C and 25°C.

If the material is kept beyond the recommended shelf life, it is not necessarily unusable, but a quality control should be performed on the properties relevant to the application.

The general information under “Storage” on p.3 of our leaflet entitled “Wacker RTV-2 Silicone Rubber Processing” must also be observed.

Instructions for use

ELASTOSIL M4503 is cured by adding either Catalyst T35 for long pot lives and curing times, or Catalyst T46 for short pot lives and curing times.

Catalyst Dosage

Catalyst [wt %]	Pot life, approx [min]	Curing time (tack-free) [h]
5 % T 35	90	15-20
5 % T 46	30	10-12

The pot life figures indicate the time required for the catalyst mix to attain a viscosity of 100 000 mPa s and still be just about pourable.

The general information on pp. 1 and 2 and under “Processing” on p.4ff of our leaflet entitled “Wacker RTV-2 Silicone Rubber – Processing” must also be observed.

Mores detailed information on the mould-making compounds in the ELASTOSIL M range is contained in our brochure “ELASTOSIL M. The flexible mould-making material for perfect copies”.

Safety instructions

Being a condensation-curing silicone rubber, ELASTOSIL M4503 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 T35 and T46 contain a tetraorganotin compound, are flammable (flash points 50°C and 34°C respectively) and may cause irritation in contact with the eyes and skin. Adequate protective measures are required.

Comprehensive instructions are given in the corresponding Material safety Data Sheets. They are available on request from Wacker subsidiaries.

The general information under “Safety information” on p. 3 of our leaflet entitled “Wacker TRV-2 Silicone Rubber-Processing” must also be observed.

Packaging

Standard quantities

1kg, 5kg, 25kg

Plus the respective quantities of catalyst.

Product numbers

ELASTOSIL M4503 0115039

Catalyst T 35 0015950

Catalyst T 46 0015947

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 product for a particular purpose.

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