

Product Name

ELASTOSIL® M4470

Wacker RTV-2 Silicone Rubber

Product Description

Pourable, condensation-curing, two component silicone rubber that cures at room temperature and features:

- Good Flow and self-deaeration
- High Shore A Hardness (approx 60)
- Very good heat resistance & high thermal conductivity
- Outstanding resistance to common casting resins

Typical Applications

Elastosil® M4470 is particularly suitable for moulding applications in high elongation and tear resistance can be sacrificed in favour of excellent deformation resistance and thermal stability. Typical applications are moulds requiring high rigidity for foaming resins, high swelling resistance to common casting resin such as styrene in polyester resin, and high thermal stability and heat dissipation for casting low-melting metal alloys. It is only suitable for very minor or no undercuts.

Physical Properties

Product Data / Uncured

Colour			Reddish Brown
Density @ 23°C		[g/cm ³]	1.45
Viscosity @ 23°C, after stirring	Brookfield	[mPa s]	20 000
With 3% wt Catalyst T37			
Viscosity @ 23°C	Brookfield	[mPa s]	10 000

Product Data / Cured – with 3% wt T37, after 4 days @ 23°C / 50% relative humidity

Density at 23°C, in water	ISO 2781	[g/cm ³]	1.44
Hardness, Shore A	ISO 867		60
Tensile Strength	ISO 37	[N/mm ²]	4.5
Elongation at Break	ISO 37	[%]	120
Tear Strength	ASTM D 624, B	[N/mm ²]	> 4
Linear Shrinkage		[%]	0.8
Coefficient of Linear Expansion	0-150°C	[m/m K]	1.5 x 10 ⁽⁻⁴⁾
Thermal Conductivity	DIN 52 612	[W/m K]	0.55

Handling Properties

Processing

With 3% wt Catalyst T37	90 [min] Pot life	20-24 [hr] Curing Time (tack free)
With 4% wt Catalyst T37	80 [min] Pot life	5-6 [hr] Curing Time (tack free)

The pot life figure indicates the time at 23°C / 50% RH required for the catalysed mix to attain a viscosity of 100 000 mPa s and still be just pourable.

Thin-walled moulds are best suited for casting low-melting metal alloys (melting point: 300°C max) and should be placed on a sheet of aluminium or other material with high thermal conductivity. Before the casting process, the mould should be post cured for a few hours at about 150°C. In order to improve wetting by the molten metal, a thin layer of extremely fine silicone carbide, graphite powder or acetylene black should be applied to the mould surface. The first castings are normally discarded since the rubber still emits gases, giving the surface of the casting a pockmarked appearance.

Elastosil® M4470 has a shelf life of at least 12 months in the sealed container between 5°C and 30°C. If the material is kept beyond 12 months it is not necessarily unusable, but a test should be performed on the product to check suitability to the application.

Notes

Further information on processing silicone can be found in the Wacker leaflet "Processing RTV-2 Silicone Rubbers". Check with your Barnes Representative for a copy of this leaflet

Issue Date

5th July 2017

Revision Number

3

Disclaimer

The data presented in this leaflet are in accordance with the present state of our knowledge, and does 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. Recommendations for use do not constitute a warranty, either expressed or implied, of the fitness or suitability of the product for a particular purpose.