ELASTOSIL® M 4601 US A/B

ELASTOSIL®

Room Temperature Curing Silicone Rubber (RTV-2)

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

Properties

- Fast and non-shrink cure at room temperature which can be accelerated considerably by the application of heat
- Low Shore A hardness (approx. 28)
- High tear strength
- Excellent long-term stability of the mechanical properties of the cured rubber
- Outstanding resistance to common casting resins particularly polyurethane

Technical data

Properties Uncured

Property	Condition	A	B	Method
Color	-	White	Reddish Brown	-
Density	23 °C	1.14 g/cm^3	1.01 g/cm^3	-
Viscosity, dynamic after stirring	23 °C	25000 mPa·s	1000 mPa·s	Brookfield

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

Catalyzed

Property	Condition	Value	Method
Color	-	Reddish Brown	-
Viscosity, dynamic	23 °C	15000 mPa·s	ISO 3219
Platinum catalyst in component	-	B	-
Mix ratio[(1)]	-	9 : 1	A : B
Pot life	-	90 min	-
Curing time	-	12.0 h	-

[1]\

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

Properties Cured

Property	Condition	Value	Method
Density	23 °C	1.13 g/cm^3	-
Tear strength	-	> 170 lb/in	ASTM D 624 B
Hardness Shore A	-	28	ISO 868
Tensile strength	-	940 psi	ISO 37
Elongation at break	-	700 %	ISO 37
Linear shrinkage	-	< 0.1 %	-

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

Applications

- Construction Molding
- Creative Moldmaking
- Reproduction Molding
- Reproduction Molding for foundry, arts and handicraft

Application details

Due to the outstanding resistance to casting resins as well as the superior mechanical properties, ELASTOSIL® M 4601 US A/B is especially suitable for all molds of models with extensive undercuts that are to be reproduced in casting resins.

As a low-Shore addition-curing RTV-2 silicone rubber that cures without undergoing dimensional shrinkage, ELASTOSIL® M 4601 US A/B is also extremely suitable for casting all other common reproduction materials, particularly if absolutely accurate copies of models with pronounced undercuts are required.

Processing

Important

The platinum catalyst is contained in component B.

Caution

Only components A and B with the **same lot number** may be processed together!

To ensure both optimum flow and homogeneity of the material, the components must be stirred thoroughly before they are removed or processed in their containers, in order to uniformly disperse any fillers that might have settled during storage.

The tables below indicate the pot lives and curing times at various temperatures.

The pot life figures indicate the time required for the mix to reach a viscosity of 60 000 mPa s.

The curing times apply to a layer thickness of 1 cm.

Thin-walled molds are best suited for casting lowmelting metal alloys (melting point: 300 °C max.) and
should be placed on a sheet of aluminum or other material with high thermal conductivity.

Before the casting process, the mold should be postcured 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 mold surface.

The first castings normally have to be discarded since the rubber still emits gases, giving the surface of the
casting a pockmarked appearance.

Comprehensive instructions are given in our leaflet "Wacker RTV-2 Silicone Rubber - Processing."

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”.

Pot lives

Processing temperature		
-15 °C	[d]	> 2
5 °C	[h]	6
15 °C	[h]	3
23 °C	[min]	90
30 °C	[min]	40

Curing times

Curing temperature		
23 °C	[h]	12
35 °C	[h]	3
70 °C	[min]	20
100 °C	[min]	10
150 °C	[min]	5

Packaging and storage

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

Components A and B of the addition-curing grade ELASTOSIL® M 4601 US A/Bcontain 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. 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® M 4601 US A/B

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

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