WACKER SilGel® 612 A/B

SILICONE GEL

Product description

WACKER SilGel® 612 A/B is a pourable, addition-curing, RTV-2 silicone rubber that vulcanizes at room temperature to a very soft silicone gel.

Special features

- two-part, 1 : 1 mixing ratio
- low viscosity
- rapid heat cure
- very low hardness (silicone gel)
- crystal clear
- pronounced inherent tack
- flame retardant, UL listed 94HB

Application

- encapsulation of electronic components for the automotive and power electronics industries
- encapsulation of solar cells
- production of damping elements
- sealing of clean room filters

Processing

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

Surface preparation
All surfaces must be clean and free of contaminants that will inhibit the cure of WACKER SilGel® 612 A/B. Examples of inhibiting contaminants are sulfur containing materials, plasticizers, urethanes, amine containing materials and organometallic compounds – especially organotin compounds. If a substrate's ability to inhibit cure is unknown, a small scale test should be run to determine compatibility.

Mixing
Component B of WACKER SilGel® 612 A/B contains the platinum catalyst, component A the crosslinker. Even traces of the platinum catalyst may cause gelling of the component containing the crosslinker. Therefore tools (spatula, stirrers, etc.) used for handling the platinum-containing component or the catalyzed compound must not come into contact with this component.
The two components should be thoroughly mixed at a 1 : 1 ratio by weight or volume.
To eliminate any air introduced during dispensing or trapped under components or devices a vacuum encapsulation is recommended.

Curing:
Curing time of addition curing silicone rubber is highly dependent on temperature, size and heat sink properties of the component being potted.

The reactivity can be adjusted within wide limits by adding Catalyst EP or Inhibitor PT 88 to suit the processing requirements of the particular application. Catalyst EP increases the reactivity, i. e., pot life and curing time are reduced.
Inhibitor PT 88 is a pot life extender and prolongs pot life and curing time.
Further information is given in our leaflet “Catalyst EP/Inhibitor PT88”.

Hardness
If the gel is too soft and tacky, reducing the amount of component B will result in a harder, less tacky vulcanizate. The hardest formulation is achieved with a mixing ratio for A : B of approximately 1.5 : 1.
For logistical reasons we can only accept orders in a mixing ratio of A : B = 1 : 1.
Tack-free surfaces can be achieved by coating with ELASTOSIL® RT 601.

Pigmentation
WACKER SilGel® 612 A/B can be pigmented by adding 1 - 4% of an ELASTOSIL® FL pigment paste.

We recommend running preliminary tests to optimize conditions for the particular application.
Comprehensive processing instructions are given in our leaflet "Wacker RTV-2 Silicone Rubber - Processing".

Temperature	Curing time
23 °C	8 h
100 °C	15 min
150 °C	5 min

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

According to the latest findings WACKER SilGel® 612 A/B being an addition-curing silicone rubber contains neither toxic nor aggressive substances which might require special handling precautions. General industrial hygiene regulations should be observed.

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.

Product data

Typical general characteristics	Inspection Method	Value
Product data (uncured)		
Component A		
Color		clear
Viscosity at 23 °C	ISO 3219	1000 mPa s
Density at 23 °C		0,97 g/cm³
Component B		
Color		clear
Viscosity at 23 °C	ISO 3219	1000 mPa s
Density at 23 °C		0,97 g/cm³
Product data (catalyzed A + B)		
Platinum-catalyst in component		B
Mix ratio	A : B	1 : 1
Viscosity of mix	ISO 3219	1000 mPa s
Pot life at 23 °C		150 min
Product data (cured)		
Color		clear
Density at 23 °C	ISO 2781	0,97 g/cm³
Penetration (150 g hollow cone)	DIN ISO 2137	300 mm/10
Permittivity	IEC 60250	2,7
Volume resistivity	IEC 60093	10^{15} Ω cm
Refractive index	n_D^{25}	1,404
Flame retardancy	UL listing	94 HB

Cured for 30 min at 150 °C in a circulating air oven.
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.

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

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