WACKER SilGel® 612 A/B

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Silicone Gels

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.

Properties

- Two-part, 1:1 mixing ratio
- Very low hardness (silicone gel)
- Low viscosity for easy process control
- Rapid cure at room temperature
- Excellent adhesion on various substrates

Technical data

Properties Uncured

Property	Condition	A	B	Method
Color	-	clear	clear	-
Density	23 °C	0.97 g/cm³	0.97 g/cm³	DIN EN ISO 2811-1
Viscosity, dynamic	25 °C	1000 mPa·s	1000 mPa·s	ISO 3219

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

Properties Catalyzed A+B

Property	Condition	Value	Method
Viscosity, dynamic	25 °C	1000 mPa·s	ISO 3219
Platinum catalyst in component	-	B	-
Mix ratio	-	1 : 1	A : B
Pot Life[(1)]	23 °C	150 min	DIN EN ISO 2555

[1]Brookfield, Sp. 4, 2.5 UPM; until 50.000 mPas

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Properties Cured

Cured for 1h at 100 °C in a circulating air oven

Property	Condition	Value	Method
Color	-	clear	-
Density	23 °C	0.97 g/cm^3	DIN EN ISO 1183-1 A
Penetration[(1)]	-	300 1/10mm	DIN ISO 2137
Refractive index nD^{25}	25 °C	1.404	-
Volume resistivity	-	10^{15} Ohmcm	IEC 62631-3-1
Permittivity	50 Hz	2.7	IEC 62631-2-1
Flame retardancy	-	94 HB	UL Listing

[1]150 g hollow cone, 1 min.

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All the information provided is in accordance with the present state of our knowledge. Nonetheless, we disclaim any warranty or liability whatsoever and reserve the right, at any time, to effect technical alterations. The information provided, as well as the product's fitness for an intended application, should be checked by the buyer in preliminary trials. Contractual terms and conditions always take precedence. This disclaimer of warranty and liability also applies particularly in foreign countries with respect to third parties' rights.

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER subsidiaries or may be downloaded via WACKER web site http://www.wacker.com.

Applications

- Electronic Control Unit (ECU)
- Electronics
- Heating, Ventilation, Air Conditioning (HVAC)
- Potting & Encapsulation
- Power Control Unit (PCU)

Application details

- 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

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

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

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

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.

additives

WACKER SilGel® 612 A/B can be pigmented by adding 1 - 4 % of an ELASTOSIL® FL pigment paste.
The reactivity can be adjusted within wide limits by adding ELASTOSIL® Catalyst EP or Inhibitor PT 88 to suit the processing requirements of the particular application. ELASTOSIL® 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 "ELASTOSIL®Catalyst EP / Inhibitor PT88".
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".

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

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.

QR Code WACKER SilGel® 612 A/B

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

Wacker Chemie AG, Gisela-Stein-Strasse 1, 81671 Munich, Germany
productinformation@wacker.com, www.wacker.com

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