WACKER SilGel® 613

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Silicone Gels

WACKER SilGel® 613 is a pourable, addition-curing, RTV-2 silicone rubber that vulcanizes at room temperature to a very soft silicone gel.

Properties

- two-part, 10 : 1 mixing ratio
- very low viscosity
- rapid curing at room temperature with ELASTOSIL® CAT PT-F
- very low hardness (silicone gel)
- inherent tack
- excellent mechanical damping properties
- rapid UV curing at room temperature in combination with long potlife (with ELASTOSIL® CAT UV)

Technical data

Properties Uncured

Property	Condition	Value	Method
Color	-	clear	-
Density	23 °C	0.97 g/cm^3	ISO 2811
Viscosity, dynamic	25 °C	150 mPa·s	DIN EN ISO 3219

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

Catalyzed

Property	Condition	Value	Method
Viscosity, dynamic of mix	-	200 mPa·s	ISO 3219
Mix ratio[(1)]	-	10 : 1	-
Pot Life CAT PT	23 °C	60 min	DIN EN ISO 2555
Pot Life CAT PT-F	23 °C	5 min	DIN EN ISO 2555
Pot Life CAT UV	23 °C	2 d	DIN EN ISO 2555
Suitable catalyst	-	ELASTOSIL CAT PT (-F) / UV	-

[1](by weight or volume)

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

Properties Cured

Cured for 30 min at 150°C.

Property	Condition	Value	Method
Color	-	clear	-
Density	23 °C	0.97 g/cm^3	DIN EN ISO 1183-1 A
Penetration (hollow cone, 9.38 g)	-	70 1/10mm	DIN ISO 2137

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Applications

- Automotive Electronics
- Battery
- Electronics
- Encapsulation
- Heating, Ventilation, Air Conditioning (HVAC)
- Measurement & Control, Sensor Technology
- Potting & Encapsulation
- Power Control Unit (PCU)
- Power Electronics

Application details

- encapsulation of electronic components for the automotive and power electronics industries
- production of damping elements

Processing

Surface preparation All surfaces must be clean and free of contaminants that will inhibit the cure of WACKER SilGel® 613. 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.

WACKER SilGel® 613 and ELASTOSIL® CAT PT (-F, -UV) should be thoroughly mixed at a 10 : 1 ratio by weight or volume.

Curing:
Curing time of addition-curing silicone rubber is highly dependent on temperature, size and heat sink properties of the component being potted. Curing speed of the combination WACKER SilGel® 613 and ELASTOSIL® CAT UV (10:1) is highly dependent on UV-activation (UV/intensity and dose).

Temperature	Curing time
ELASTOSIL® CAT PT	
23 °C	4 h
100 °C	10 min
150 °C	5 min
ELASTOSIL® CAT PT-F	
23 °C	20 min
50 °C	5 min
100 °C	1 min

UV activation (100 mW/cm²)		Curing time at 25°C	
ELASTOSIL® CAT UV			
UV time [sec]	UV dose [mJ/cm²]	Gel time [sec]	Total time [sec]
5 mm			
5	500	50	55
20	2500	20	40

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® 613 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® 613

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

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