

NEUKASIL RTV 23

Silicone Rubber
addition-crosslinking

altropol

Main features

- high resistance to initial tearing and tear propagation
- very good flowability
- variable hardness
- variable pot life

Applications

- production of elastic moulds
- suitable for e. g. gypsum, wax
- casting of electrical component parts
- products for orthopaedics
- coating of woven fabrics

Properties in the non-crosslinked state (approx. values)

		NEUKASIL RTV 23	NEUKASIL Crosslinker A 7	NEUKASIL Crosslinker A 14	NEUKASIL Crosslinker A 18
Colour		colourless	colourless	colourless	colourless or blue
Mixing ratio	p.b.w.	100	40	30	10
Density (20 °C)	g/cm ³	1.10	0.98	0.96	0.95
Viscosity (20 °C)	mPa·s	45,000	90	90	150

Properties of the mixture and the cured product (approx. values)

Mixed viscosity	mPa·s		3,500	8,500	25,000
Pot life (RT, 1000 g)	minutes		150	120	90
Tack-free, depending on layer thickness	hours		24	24	24
Hardness	Shore A	DIN 53505	6	12	25
Service temperature under air admission, briefly	max. °C		160	160	160

Mechanical values of the cured product (approx. values)

Tensile strength	MPa	DIN 53504	2.05	2.0	4.5
Elongation at tear	%	DIN 53504	1,000	520	8,500
Resistance to tear propagation	N/mm	ASTM D 624 B	8	13	20
Linear dimensional change	%		0.1	0.1	0.1
Resistivity	Ω cm	DIN 53482	10 ¹⁵	10 ¹⁵	10 ¹⁵
Dielectric strength	KV/mm	DIN 52481	22	22	22
Dielectric constant	ε r	DIN 52483	3.0	3.0	3.0
Dissipation factor	tan δ 60 Hz	DIN 53483	0.008	0.008	0.008

*RT = room temperature

Important: The platinum catalyst is in NEUKASIL RTV 23.

How to process the material

See that as little air as possible gets into the compound while stirring. To obtain a bubble-free vulcanized material, we recommend evacuating the crosslinker-containing formulation before continuing the processing.

When the vacuum is created, the mixture may expand by 3 - 4 times of its original volume under formation of bubbles. The process is finished when the bubbles have collapsed and the formulation has reobtained its original volume. Carefully pour the prepared material over the object to be cast.

Whenever working with addition-crosslinking silicone rubbers, take care that the vessels used are clean and dry. Furthermore, the surface of the object to be cast should be dry and free from dirt. Certain substances may inhibit or decelerate the vulcanization of addition-crosslinking silicone rubbers. Such substances are among other things condensation-crosslinking silicones, organic rubbers, plasticizers, amines, heavy-metal compounds and sulphurous substances.

Under unfavourable circumstances, it may happen that also surfaces having been in contact with the mentioned substances lead to vulcanization faults. The same applies to certain modelling materials.

When NEUKASIL RTV 23 is used as mould making material (production of negatives), there is no release agent required for demoulding. Should there still arise any problems, we recommend our NEUKADUR Release Agent SE or NEUKADUR Release Spray P 6. For the production of multipart moulds and to avoid an adhesion of NEUKASIL RTV 23 to itself, use the same release agents. Treat the surface of the part already vulcanized with release agent, then cast the second part of the mould.

For release agents, please visit our homepage under <http://www.altropol.de/en/produkte/weitere-produkte/trennmittel>

The vulcanization of NEUKASIL RTV 23 begins after addition of the crosslinkers, and there are no cleavage products produced at all. At 20 to 25 °C, the vulcanization is to a large extent finished after 24 hours. The vulcanization speed is temperature-dependent and can be accelerated considerably by heat supply. Pot life and vulcanization time can however also be extended individually by means of the pot life retarder NEUKASIL SN 2432.

Longer pot life

By addition of 0.1 % of NEUKASIL Retarder SN 2432 to the NEUKASIL RTV 23, the pot life can be extended by approx. 50 minutes. We recommend to mix the NEUKASIL SN 2432 Retarder into the silicone rubber beforehand and to add then the NEUKASIL Crosslinker.

Thixotropic adjustment

By addition of the component NEUKASIL Thixotropic Agent SN 200, the silicone rubber can be made thixotropic for special applications, i. e. the compound is then no longer liquid and castable, but pasty, brushable. For this, add approx. 0.5 to 1.0 % of NEUKASIL Thixotropic agent SN 200 to the already mixed components. The thixotropic effect already occurs after a short period of time.

NEUKASIL RTV is the designation for „Room Temperature Vulcanizing“ 2-component silicone rubber systems of ALTROPOL KUNSTSTOFF GmbH.

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Form of delivery

NEUKASIL RTV 23	1 kg*	5 kg	25 kg	
NEUKASIL Crosslinker A 7	0.4 kg*	2 kg	10 kg	
NEUKASIL Crosslinker A 14	0.3 kg*	1.5 kg	7.5 kg	
NEUKASIL Crosslinker A 18	0.1 kg*	0.5 kg	2.5 kg	
NEUKASIL SN 2432 Retarder	0.03 kg	0.1 kg	0.5 kg	1 kg
NEUKASIL Thixotropic Agent SN 200	0.01 kg	0.05 kg	0.2 kg	5 kg

*=minimum order quantity = 6 working packages

Storage

We recommend keeping the material in tightly closed original receptacles at temperatures of 20 - 25 °C. When duly stored, the material can be used within the shelf life indicated on the labels (the first 2 digits of the batch number indicate the week, the 3rd digit indicates the year).

Measure of precaution

With the aid of the current safety data sheets, which contain physical, ecological, toxicological and other data relating to safety, the user can inform himself on the safe handling and storage of the products.

Our technical service - in words, in writing or by trials - is given according to the current state of our knowledge. It does however not relieve the customer/user from the duty to check by himself if the products supplied by us are suitable for the intended processes and purposes. Application, use and processing of the products take place beyond our control possibilities and lie therefore exclusively in the area of responsibility of the processor. Any existing property rights of third parties are to be considered. We guarantee the perfect quality of our products in accordance with our general terms and conditions of business. When handling our products you have to observe the legal rules and the rules for the industrial hygiene. As for the rest, we refer to the corresponding safety data sheets.

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• www.altropol.de •

• Altropol Kunststoff GmbH • Rudolf-Diesel-Straße 9 - 13 • D-23617 Stockelsdorf • Tel. +49 451-499 60-0 •

• Fax. +49 451-499 60-20 • E - Mail: info@altropol.de •