

NEUKASIL RTV 23

Silicone Rubber
addition-crosslinking

altropol

Main features

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

Applications

- production of elastic moulds
- suitable for e. g. plaster, wax
- casting of electric component parts
- products for orthopaedics
- coating of tissues

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

		NEUKASIL RTV 23	NEUKASIL Crosslinker A 3	NEUKASIL Crosslinker A 18
Colour		colourless	colourless	colourless or blue
Density 20 °C	g/cm ³	1.10	0.98	0.95
Viscosity 20°C	mPas	45,000	60	150

Properties of the mixture (approx. values)

Mixing ratio	p.b.w.	100	6.5	10
Mixed viscosity	mPas		30,000	25,000
Pot life	(1000g) minutes		60	90
tack-free	(RT) hours		24	24
Hardness	Shore A		20	25
Service temperature	°C		160	160
Tensile strength	N/mm ²		3.5	4.5
Elongation at break	%		500	850
Resistance to tear propagation	N/mm ²		13.0	20.0
linear shrinkage	%		0.1	0.1
Resistivity	Ω cm		10 ¹⁵	10 ¹⁵
Dielectric strength	KV/mm		22	22
Dielectric constant	ε r		3.0	3.0
Dissipation factor	δ 60 Hz		0.008	0.008

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 preparation before continuing the processing. When the vacuum is created, the mixture may increase in volume by 3 to 4 times of its original volume under formation of bubbles. The process is finished when the bubbles have collapsed and the preparation has reobtained its original volume. Carefully pour the prepared material over the object to be moulded.

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Whenever working with addition-crosslinking silicone rubbers, take care that the receptacles used are clean and dry. Furthermore, the surface of the object to be moulded should be dry and free from dirt. Certain substances may inhibit or retard the crosslinking of addition-crosslinking silicone rubbers. Such substances are among others condensation-crosslinking silicones, organic rubbers, plasticizers, amines, heavy-metal compounds and sulphurous compounds. Under unfavourable circumstances, it may happen that also surfaces having been in contact with the mentioned substances as well as certain moulding materials lead to vulcanization faults.

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 N 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.

The vulcanization of NEUKASIL RTV 23 begins after addition of the crosslinkers, and there are no cleavage products whatsoever produced during this process. At 20 – 25°C, the vulcanization is terminated to a large extent after 24 hours. The vulcanization speed is temperature-dependent and can be accelerated considerably by heat supply.

Form of delivery

NEUKASIL RTV 23	1*; 5 and 25 kg
NEUKASIL Crosslinker A 3	65g*; 0.325 and 1.625 kg
NEUKASIL Crosslinker A 18	0.1*; 0.5 and 2.5 kg

*= minimum order quantity = 6 working packages

Storage

The material should be kept in tightly closed original receptacles at temperatures of 15 - 25 °C. When duly stored, the materials can be used within the shelf life indicated on the labels. If stored for a longer period of time, the crosslinkers produce a slight sediment in the receptacle which does however not affect the usability.

Measure of precaution

Users should make use of the current safety data sheets, which contain physical, ecological, toxicological and other data relating to safety, to inform themselves on the safe handling and storage of the products.

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