

NEUKASIL RTV 103

Silicone Rubber

condensation-crosslinking

altropol

Main features

- high resistance to initial tearing and tear propagation
- very good flow properties
- can be made thixotropic

Applications

- mould making
- suitable for polyester, epoxides, wax

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

		NEUKASIL RTV 103	NEUKASIL Crosslinker C 02	NEUKASIL Crosslinker C 02 S	NEUKASIL Thixotropic Agent SI - C
Colour		white	colourless	colourless	colourless
Mixing ratio	p.b.w.	100	5	5	0.5 – 1.5
Density (20 °C)	g/cm ³	1.10	0.95	0.95	1.0
Viscosity (20°C)	mPa·s	60,000	30	100	300

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

Mixed viscosity	mPa·s		37,000	48,000	thix
Pot life (RT, 1000 g)	minutes		90	15	
tack-free depending on layer thickness	hours		20	10	
Hardness (24h)	Shore A	DIN 53505	18	20	
Hardness (7d)	Shore A	DIN 53505	28	26	25
Service temperature under air access, short-term	°C		180	180	
Tensile strength	N/mm ²	DIN 53504	2.5	3.0	
Elongation at break	%	DIN 53504	420	420	
Resistance to tear propagation	N/mm	ASTM D 624 B	20	20	
Linear dimensional change	%		1	1	

(RT = room temperature)

How to process the material

For the preparation of a formulation being ready for processing, add the required quantity of crosslinker to the rubber and stir the compound until it is homogeneous. 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.

To adjust an individual Shore A-hardness, you can mix NEUKASIL RTV 103 in any ratio desired with NEUKASIL RTV 102.

When the vacuum is created, the mixture increases in volume by 3 to 4 times of its original volume under formation of bubbles. The degassing process is finished when the bubbles have collapsed and the formulation has reobtained its original volume. Avoid a longer stay of the crosslinker-containing formulation in the vacuum as otherwise you run the risk that parts of the crosslinkers will be removed. Carefully cast the prepared material without enclosing bigger quantities of air again.

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Thixotropic Adjustment

By addition of the component NEUKASIL Thixotropic Agent SI-C, the silicone rubber can be made thixotropic for special applications, i. e. the compound is then no longer liquid and castable, but brushable to pasty. For this, add approx. 0.5 to 1.5 % of NEUKASIL Thixotropic Agent SI-C to the already mixed compound of NEUKASIL RTV 103 incl. crosslinker. The thixotropic effect already occurs after a short period of time.

When NEUKASIL RTV 103 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 103 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>

Form of delivery

NEUKASIL RTV 103	1.00 kg	5.00 kg	25.00 kg	
NEUKASIL Crosslinker C 02	0.05 kg	0.25 kg	1.25 kg	
NEUKASIL Crosslinker C 02 S	0.05 kg	0.25 kg	1.25 kg	
NEUKASIL Thixotropic Agent SI – C	0.01 kg	0.05 kg	0.20 kg	5.00 kg

Storage

We recommend keeping the material in tightly closed original receptacles at temperatures of 15 - 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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