

NEUKASIL RTV 10

Silicone Rubber
condensation-crosslinking

altropol

Main features

- low-viscous
- very good flow properties
- higher hardness
- variable pot lives

Applications

- mould making
- suitable for polyester, epoxides, wax
- casting of electrical component parts

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

		NEUKASIL RTV 10	NEUKASIL Crosslinker C 1	NEUKASIL Crosslinker C 5	NEUKASIL Crosslinker C 25
Colour		white	colourless	colourless	colourless
Mixing ratio	p.b.w.	100	3	3	2
Density 20 °C	g/cm ³	1.3	0.9	1.0	0.9
Viscosity 20 °C	mPa·s	4,800	20	25	40

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

Mixed viscosity	mPa·s		4,000	4,000	4,000
Pot life (RT) (1000 g)	minutes		160	80	15
Tack-free depending on layer thickness	hours		24	15	6
Shore A-hardness	points	DIN 53505	50	50	50
Service temperature under air access, short-term	max °C		230	230	230
Tensile strength	N/mm ²	DIN 53504	2.0	2.0	2.0
Elongation at tear	%	DIN 53504	150	150	150
Resistance to tear propagation	N/mm	ASTM D 624 B	4.0	3.5	4.0
Resistivity	Ω cm	DIN 53482	5 • 10 ¹³	5 • 10 ¹³	5 • 10 ¹³
Dielectric strength	KV/mm	DIN 53481	24	24	24
Dielectric constant	ε at 25°C	DIN 53483	50 Hz - 3.1 1 KHz - 3.0 1 MHz - 3.0 3 GHz - 2.9	50 Hz - 3.1 1 KHz - 3.0 1 MHz - 3.0 3 GHz - 2.9	50 Hz - 3.1 1 KHz - 3.0 1 MHz - 3.0 3 GHz - 2.9
Dissipation factor	tan δ at 25°C	DIN 53483	50 Hz - 0.020 1 KHz - 0.010 1 MHz - 0.004 3 GHz - 0.006	50 Hz - 0.020 1 KHz - 0.010 1 MHz - 0.004 3 GHz - 0.006	50 Hz - 0.020 1 KHz - 0.010 1 MHz - 0.004 3 GHz - 0.006
Arc resistance	KA		3c	3c	3c
Test solution A. and F.	KC		>600	>600	>600

(RT = room temperature)

How to process the material

For the crosslinking of NEUKASIL RTV 10 serve the NEUKASIL Crosslinker C 1, the NEUKASIL Crosslinker C 5 and the NEUKASIL Crosslinker C 25. They can be mixed with each other in any ratio desired. Consequently, different pot lives are adjustable.

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.

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.

When NEUKASIL RTV 10 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 10 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/and-more/release-agents.html>

Demoulding of parts made from NEUKASIL RTV 10 can be effected after 20 – 24 hours at the earliest. To complete the crosslinking process to a large extent, moulds made from NEUKASIL RTV 10 should be kept in the air for approx. 48 hours prior to the first use. These measures will help to improve the mechanical properties of the rubber and prolong the service life of the mould.

Form of delivery

NEUKASIL RTV 10	1.00 kg	5.00 kg	10.00 kg	25.00 kg
NEUKASIL Crosslinker C 1	0.03 kg	0.15 kg	0.75 kg	
NEUKASIL Crosslinker C 5	0.03 kg	0.15 kg	0.30 kg	0.75 kg
NEUKASIL Crosslinker C 25	0.02 kg	0.10 kg	0.25 kg	

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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