

# NEUKASIL RTV 20

Silicone Rubber  
addition-crosslinking

# altropol

## Main features

- very good flowability
- high Shore A-hardness

## Applications

- general mould making
- coating of woven fabrics
- embedding and electrical insulation

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

		NEUKASIL RTV 20	NEUKADUR Crosslinker A 101
Colour		white	aluminium grey / colourless
Mixing ratio	p.b.w.	100	20
Density (20 °C)	g/cm <sup>3</sup>	1.20	1
Viscosity (25 °C)	mPa·s	100,000	200

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

Mixed viscosity	mPa·s		35,000
Pot life (20°C)	(1000 g) minutes		130
Curing time (RT) *	hours		24
Hardness (24h)	Shore A	DIN 53505	45
Service temperature, short-term	°C		180
Tensile strength	MPa	DIN 53504 S2	6
Elongation at break	%	DIN 53504 S2	250
Resistance to tear propagation	N/mm	ASTM D 624 B	7
Linear dimensional change	%		0.1
Resistivity	Ω cm	DIN 53482	10 <sup>15</sup>
Dielectric strength	KV/mm	DIN 53481	22
Dielectric constant	ε r	DIN 53483	3.0
Dissipation factor	δ 60 Hz	DIN 53483	0.008

\*The vulcanization is temperature-dependent and is accelerated considerably by heat supply.

**Important information: The platinum catalyst is in the component NEUKASIL RTV 20.**

## 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 increase in volume 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, see that the receptacles used are clean and dry. Furthermore, the surface of the object to be cast should as far as possible be dry and free from dirt.

## Release agents

When NEUKASIL RTV 20 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 New or NEUKADUR Release Spray P 6.

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

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For the production of multipart moulds and to avoid an adhesion of NEUKASIL RTV 20 to itself, use the same release agents. Treat the surface of the already vulcanized part of the mould with release agent, then cast the second part of the mould.

When processing polyester resins and other casting resins, it is recommended keeping the moulds after use in the air for some hours or heating them up to 50 – 100 °C for 1 to 3 hours. This measure allows the components of casting resin having got into the surface of the mould to escape again, and the stability of the mould and the number of casts are increased considerably.

### **Compatibility with other materials**

NEUKASIL RTV 20 is well compatible with all common pattern materials such as wood, plaster, metals and plastic material and provides perfect casts.

Certain substances inhibit or decelerate the vulcanization of NEUKASIL RTV 20 which can be noticed by tacky surfaces or surfaces containing bubbles. To these substances belong among other things condensation-crosslinking silicones, organic rubbers, plasticizers, amines, heavy-metal compounds and sulphurous substances. High air humidity and water may also lead to disturbances. 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. In case of doubt, we recommend carrying out pretrials on a small scale.

### **Vulcanization**

By vulcanization or cross-linking one understands the transition from liquid, castable silicone rubber to the tack-free, elastomeric state. It begins after addition of the crosslinker, 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.

NEUKASIL RTV is the designation for 2-component silicone rubber systems of the ALTROPOL KUNSTSTOFF GmbH vulcanizing at room temperature.

### **Form of delivery**

NEUKASIL RTV 20	1.00 kg	5.00 kg	25.00 kg
NEUKASIL Crosslinker A 101	0.20 kg	0.50 kg	2.50 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 3<sup>rd</sup> 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 product.

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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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