

## NEUKASIL RTV 20

Silicone Rubber  
 addition-crosslinking

# altropol

### Main features

- higher hardness
- very good flow properties
- high resistance to initial tearing and tear propagation
- variable pot life

### Applications

- mould making
- suitable for polyester, epoxies, wax
- casting of electrical component parts
- production of parts
- prototypes

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

		NEUKASIL RTV 20	NEUKASIL crosslinker A 1	NEUKASIL crosslinker A 2	NEUKASIL crosslinker A 26
Colour		white	colourless/blue	colourless/blue	colourless/blue
Mixing ratio	p.b.w.	100	10	10	10
Density 20 °C	g/cm <sup>3</sup>	1.2	1.0	1.0	1.0
Viscosity	mPa·s	100,000	5,500	400	500

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

			NEUKASIL crosslinker A 1	NEUKASIL crosslinker A 2	NEUKASIL crosslinker A 26
Mixed viscosity	mPa·s		95,000	80,000	80,000
Pot life	(1000g) minutes		90	90	120
Curing time (RT)*	hours		24	24	24
Hardness (RT)	Shore A	DIN 53505	55	55	55
Service temperature, short-term	°C		240	240	240
Tensile strength	MPa	DIN 53504	6.0	6	6
Elongation at break	%	DIN 53455	250	300	300
Resistance to tear propagation	N/mm	ASTM D 624 B	8	8	8
Linear dimensional change	%		0.1	0.1	0.1
Resistivity	Ω cm	DIN 53482	10 <sup>15</sup>	10 <sup>15</sup>	10 <sup>15</sup>
Dielectric strength	KV/mm	DIN 53481	22	22	22
Dielectric constant	ε r	DIN 53483	3.0	3.0	3.0
Dissipation factor	δ 60 Hz	DIN 53483	0.008	0.008	0.008

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

**Important information: The platinum catalyst is in 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 volume under formation of bubbles. This 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 receptacles used are clean and dry. Furthermore, the surface of the object to be cast should 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 or NEUKADUR Release Spray P 6.

For release agents, please visit our homepage under <http://www.altropol.de/and more/release agents.html>

# NEUKASIL RTV 20

Silicone Rubber  
addition-crosslinking

# altropol

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 part already vulcanized 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 materials 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.

## Food items and consumer goods

The raw materials used in the RTV 20 system are listed in the recommendation XV 'Silicones' dated 01.03.2011 of the Plastics Commission of the German Department of Public Health (BfR). Consequently, the product can be designated as non-toxic. There are no doubts as to the use of silicone rubber RTV 20 for the production of consumer goods in the sense of the Foodstuffs and Consumer Goods Act.

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

## Form of delivery

NEUKASIL RTV 20	1.00 kg * 5.00 kg	25.00 kg
NEUKASIL crosslinker A 1	0.10 kg * 0.50 kg	2.50 kg
NEUKASIL crosslinker A 2	0.10 kg * 0.50 kg	2.50 kg
NEUKASIL crosslinker A 26	0.10 kg * 0.50 kg	2.50 kg

\*=minimum order quantity = 6 working packages

## 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 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 products.

Altropol Kunststoff GmbH  
Rudolf-Diesel-Straße 9 - 13 · D-23617 Stockelsdorf  
Tel. +49 (0)451-499 60-0 • Fax +49 (0)451-499 60-20  
E-Mail: info@altropol.de

[www.altropol.de](http://www.altropol.de)

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.

State: 2014-03-17/3