NEUKASIL RTV 17

Silicone Rubber
condensation-crosslinking

swiss-composite.ch
suter-kunststoffe ag

altropol

Main features

- low-viscous
- very good flowing properties
- high hardness
- variable pot lives

Applications

- mould making
- suitable for polyester, epoxies, wax
- casting of low-melting metals
- casting of electric component parts

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

		NEUKASIL RTV 17	NEUKASIL Crosslinker C 5	NEUKASIL Crosslinker C 1	NEUKASIL Crosslinker C 25
Colour		red	colourless	colourless	colourless
Density 20 °C	g/cm³	1,45	1,0	09	1,05
Viscosity 20°C	mPas	11,000	25	20	90

Properties of the mixture (approx. values)

Mixing ratio	p.b.w.	100	2	3	2
Mixed viscosity	mPas		7,000	7,000	7,000
Pot life	(1000g) Minutes		45	120	5
tack-free	Hours		6 - 15	6 - 15	6 - 15
Hardness	Shore A		65	65	65
Service temperature	°C		250	250	250
Tensile strength	N/mm^2		4,0	2.0	2.0
Elongation at break	%		200	100	100
Resistance to tear propagation	N/mm		4,0	3.0	3.0
Resistivity	cm		$5 \cdot 10^{13}$	$5 \cdot 10^{13}$	$5 \cdot 10^{13}$
Dielectric strength	KV/mm		24	24	24
Dielectric constant	ε at 25°C		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	δ at 25°C		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

How to process the material

For the crosslinking of NEUKASIL RTV 17 serve the crosslinkers NEUKASIL VN C 5, NEUKASIL VN C 1 and VN C 25. They can be mixed with each other in any ratio deisred. Consequently, different pot lives can be adjusted. The mixing ratio on 100 parts by weight of NEUKASIL RTV 17 is 3 parts by weight of VN C 5 or VN C 1. With VN C 25, the mixing ratio is 100 : 1.5 – 2 p.b.w. 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.

Release agents

When NEUKASIL RTV 17 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 17 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.

Vulcanization

By vulcanization or crosslinking one understands the transition from the liquid, castable silicone rubber to the tack-free, rubber-elastic state. The vulcanization of NEUKASIL RTV 17 begins after addition of the crosslinkers VN C 17, VN C 5, VN C 1 or VN C 25. Demoulding of parts made from NEUKASIL RTV 17 can be effected after 20 - 24 hours at the earliest. To complete the crosslinking process to a large extent, moulds made from NEUKASIL RTV 17 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*; 5 and 25 kg
NEUKASIL Crosslinker C 5, C 1	0.03*; 0.15 and 0.75 kg
NEUKASIL Crosslinker C 25	0.02*; 0.10 and 0.50 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.

Altropol Kunststoff GmbH
Daimlerstraße 9 · 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

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 you from the duty to check by yourselves 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: 2009-02-25