

ProtoSil RTV 250

Silicone Rubber
addition-crosslinking

altropol

Main features

- medium hard silicone rubber
- very good flowability
- high resistance to initial tearing and tear propagation

Applications

- mould production for vacuum casting
- suitable for polyester, epoxies, wax
- casting of electric component parts
- production of parts, prototypes
- compliant with FDA 21 CFR 117.2600 and BfR-Recommendation XV „Silicone“

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

		ProtoSil RTV 250 Comp. A	ProtoSil RTV 250 Comp. B
Colour		white	blue / colourless
Mixing ratio	p.b.w.	100	10
Density (20 °C)	g/cm ³	1.25	0.97
Viscosity (20 °C)	mPa·s	100,000	300

Properties of the mixture (approx. values)

Mixed viscosity (25 °C)	mPa·s		95,000
Pot life (RT)	minutes		150
Tack-free	hours		24
Hardness	Shore A		55
Service temperature	°C		200

Mechanical values of the cured product (approx. values)

Tensile strength	MPa	DIN 53455	5.0
Elongation at break	%	DIN 53455	400
Resistance to tear propagation	N/mm	ASTM D 624 B	5.5
Linear dimensional change	%		0.1
Resistivity	Ω cm	DIN 53482	10 ¹⁵
Dielectric strength	KV/mm	DIN 53481	22
Dielectric constant	ε r	DIN 53483	3.0
Dissipation factor	δ 60 Hz	DIN 53483	0.008

*RT = room temperature

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 to 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, take care that the receptacles used are clean and dry. Furthermore, the surface of the object to be moulded should be dry and free from dirt. Certain substances may inhibit or retard the vulcanization of addition-crosslinking silicone rubbers. Such substances are among others condensation-crosslinking silicones, organic rubbers, plasticizers, amines, heavy-metal compounds and sulphurous compounds. 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 modeling materials.

When NEUKASIL RTV 250 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 250 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>

The vulcanization of NEUKASIL RTV 250 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.

Consumer Goods

The Federal Institute for Risk Assessment in Berlin (BfR) treats in Recommendation XV "Silicones" dated 2014-10-01 silicone polymers (silicone oils, silicone resins, silicone elastomers).

The NEUKASIL RTV 250 addition system complies in its material composition with paragraph III of Recommendation XV „Silicones“ of the BfR.

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

Form of delivery

ProtoSil RTV 250 Comp. A	1 kg	5 kg	25 kg
ProtoSil RTV 250 Comp. B	0.1 kg	0.5 kg	2.5 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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