

NEUKASIL SN 2989 mod. 1

Addition crosslinking
Preliminary datasheet

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Main features

- high resistance to initial tearing and tear propagation
- very good flowability
- can be made thixotropic
- mixing ratio = 1 : 1
- low shore hardness

Applications

- general mould making
- orthopaedic applications

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

		NEUKASIL SN 2989 mod. 1 Comp. A	NEUKASIL SN 2989 mod. 1 Comp. B
Colour		translucent	translucent
Mixing ratio	p.b.w.	100	100
Density (20 °C)	g/cm ³	1.10	1.06
Viscosity (20 °C)	mPa·s	2,600	1,400

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

Mixed viscosity	mPa·s		2,000
Pot life (1000 g)	minutes		10
Curing time RT*	Hours		24
Hardness (24h) RT	Shore A	DIN 53505	8
Service temperature, short-term	° C		200
Tensile strength	MPa	DIN 53504	3.3
Elongation at break	%	DIN 53504	3.44
Resistance to tear propagation	N/mm	ASTM D 624 B	> 20

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

RT = room temperature

IMPORTANT: The platinum catalyst is in NEUKASIL SN 2989 mod. 1 comp. A.

How to process the material

For the preparation of a batch 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.

Thixotropic Adjustment

By addition of the component NEUKASIL Thixotropic Agent SN 200, the silicone rubber can be made thixotropic for special applications, i. e. the compound is then no longer liquid and castable, but pasty and brushable. For this, add to the already mixed components NEUKASIL SN 2989 mod. 1 Comp. A and NEUKASIL 2989 mod. 1 Comp. B approx. 0.5 to 1.0 % of NEUKASIL Thixotropic Agent SN 200. The thixotropic effect already occurs after a short period of time.

When NEUKASIL SN 2989 mod. 1 is used as mould making material (production of negatives), there is no release agent required for demoulding. Should there still arise any difficulties, 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 SN 2989 mod. 1 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 and other casting resins, we recommend keeping the moulds in the air for some hours or heating them up to 50 - 100°C for 1 to 3 hours. In this way, the casting resin components having penetrated the surface of the mould can escape again, and the stability of the mould as well as the number of casts are increased considerably.

Compatibility with other materials

NEUKASIL SN 2989 mod. 1 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 SN 2989 mod. 1 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 crosslinking one understands the transition from liquid, castable silicone rubber to the tack-free, rubbery-elastic 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 SN 2989 mod. 1 Comp. A	1 kg	25 kg	200 kg	1.000 kg
NEUKASIL SN 2989 mod. 1 Comp. B	1 kg	25 kg	200 kg	1.000 kg
NEUKASIL Thixotropic Agent SN 200	0.01 kg	0.05 kg	0.2 kg	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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• www.altropol.de •

• Altropol Kunststoff GmbH • Rudolf-Diesel-Straße 9 - 13 • D-23617 Stockelsdorf • Tel. +49 451-499 60-0 •

• Fax. +49 451-499 60-20 • E - Mail: info@altropol.de •