

NEUKASIL SN 2921

Silicone Rubber
addition-crosslinking

altropol

Main features

- Shore hardness A 38 - 42
- mixing ratio = 1 : 1
- high resistance to initial tearing and tear propagation
- shrinkage-free vulcanization at room temperature
- can be made thixotropic

Applications

- production of elastic moulds
- particularly for prototypes
- good resistance to vacuum casting resins

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

| | | NEUKASIL SN 2921 Comp. A | NEUKASIL SN 2921 Comp. B 1 |
|-------------------|-------------------|-----------------------------|-------------------------------|
| Colour | | translucent | translucent or orange |
| Mixing ratio | p.b.w. | 100 | 100 |
| Density (20 °C) | g/cm ³ | 1.1 | 0.96 |
| Viscosity (20 °C) | mPa·s | 110,000 | 13,500 |

Properties of the mixture (approx. values)

| | | | |
|--|---------|-----------|--------|
| Mixed viscosity | mPa·s | | 25,000 |
| Pot life (RT) (1000 g) | minutes | | 60 |
| Demouldable after | hours | | 12 |
| Hardness | Shore A | DIN 53505 | 40 |
| Service temperature under air admission, briefly | max. °C | | 200 |

Mechanical values of the cured product (approx. values)

| | | | |
|--------------------------------|-------------|--------------|-------------------------------|
| Tensile elongation | % | DIN 53455 | 420 |
| Tensile strength | MPa | DIN 53455 | 5 |
| Resistance to tear propagation | N/mm | ASTM D 624 B | 26 |
| Linear dimensional change | % | | 0.1 |
| Linear extension | m/(m K) | | $2.5 \cdot 10^{-4}$ (0-150°C) |
| Resistivity | Ω cm | DIN 53482 | 10^{15} |
| Dielectric strength | KV/mm | DIN 53454 | 22 |
| Dielectric constant | Er | DIN 53483 | 3.0 |
| Dissipation factor | tan δ 60 Hz | DIN 53483 | 0.008 |

* RT = room temperature

Important: The platinum catalyst is in component A.

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. Certain substances may inhibit or decelerate the crosslinking of addition-crosslinking silicone rubbers. To these substances belong among other things condensation-crosslinking silicones, organic rubbers, pasticizers, 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 modelling materials.

Release Agents

When NEUKASIL SN 2921 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 the production of multipart moulds and to avoid an adhesion of NEUKASIL SN 2921 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.

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

Acceleration / Retardation

The vulcanization of NEUKASIL SN 2921 Comp. A begins after addition of NEUKASIL SN 2921 Comp. B 1, 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. Pot life and vulcanization time can however also be extended individually with the NEUKASIL SN 2432 Retarder.

Longer Pot Life

By addition of 0.1 % of NEUKASIL SN 2432 Retarder to the NEUKASIL SN 2921 Comp. A, you can prolong the pot life by approx. 50 minutes. We recommend mixing the NEUKASIL SN 2432 Retarder first into the silicone rubber and adding then the NEUKASIL Crosslinker.

It is also possible to accelerate pot life and demoulding time by the use of the NEUKASIL Accelerator SN 2926. When adding 1% to NEUKASIL SN 2921 Comp. A, you obtain a pot life of 30 minutes and a demoulding time of approx. 6 hours without heat supply. We recommend mixing the NEUKASIL Accelerator SN 2926 first into the NEUKASIL SN 2921 Comp. A and adding then the NEUKASIL SN 2921 Comp. B.

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 brushable to pasty. For this, add approx. 0.1 to 0.3 % of NEUKASIL Thixotropic Agent SN 200 to the mixture of NEUKASIL SN 2921 Comp. A/B 1. The thixotropic effect already occurs after a short period of time.

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

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Form of delivery

| | | | | | |
|----------------------------|------|------|-------|-------|--------|
| NEUKASIL SN 2921 Comp. A | 1 kg | 5 kg | 10 kg | 25 kg | 200 kg |
| NEUKASIL SN 2921 Comp. B 1 | 1 kg | 5 kg | 10 kg | 25 kg | 200 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 product.

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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