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NEUKASIL RTV 26

NEUKASIL RTV 26 is a fluid room temperature vulcanising silicone rubber with a Shore-A-hardness of 30 and high tear strength.

Type of cross-linking agent: NEUKASIL CROSSLINKING AGENT A 18 BLUE

It is an Addition system which can be used in open and closed systems. Further cross-linking agents as well as different paste paints are available for special application.

Fields of Application:

The raw material used in NEUKASIL RTV 26 are listed in the reference XV „Silicones“ of 01.01.1980 of the man-made material commission BGA (West German Health Authorities). The product can be described as being physiologically inert. NEUKASIL RTV 26 is suitable for use in the food-handling industries. NEUKASIL RTV 26 is particularly suitable as a material for the production of elastic moulds. Practically all castable materials e.g. plaster of paris, wax, low melting compounds and casting resins can be formed in moulds made from NEUKASIL RTV 26. Furthermore NEUKASIL RTV 26 is suitable for the
proudction of orthopaedic products, coating of fabric as well as encapsulation and electronical insulation. NEUKASIL RTV 26 is a suitable material for quick and economical production of prototypes and limited series.

In the processing of polyester and other casting resins it is necessary to allow the mould to stand in the air for several hours after use, for example overnight, or to heat it up for a short time at higher temperature (50 - 100°C) so that the resin particles on the surface of the mould can soften again. These measures ensure that the mould will last longer and increase the number of times it can be used.

Properties in the uncross-linked state

		NEUKASIL RTV 26	**NEUKASIL crosslinking agent A 18 blue**
Colour		white	blue
Viscosity	mPa·s	approx. 55.000	approx. 140
Density	g/cm3	approx. 1,2	0,9
Recommended amount of crosslinking agent	% by weight	10	
Pot-life at RT	min.	approx. 90	

Processing

Cross-linking agent NEUKASIL crosslinking agent A 18 blue is used for NEUKASILRTV 26. The ratio by weight of rubber RTV 26 to cross-linking agent NEUKASIL crosslinking agent A 18 blue is 100 : 10.

A processing batch is produced by adding the required amount of cross-linking agent to the rubber and stirring until the compound is homogenous. Care should be taken not to stir in any air. For blister free vulcanisation it is advisable to evacuate the mixture before it is processed. In the course of this process the compound increases in volume three to four times its original volume.
This will disperse and the mixture will assume ist original volume. The mixture is then poured carefully over the object of which a mould is required.

The pot life of a compound is about 90 minutes at room temperature.

When working with NEUKASILRTV 26 care should be taken that all vessels are clean and dry. Similarly the surface of the object to be casted should be dry and free from dust.

Vulcanisation

Vulcanisation or cross-linkage is the process when the pourable liquid silicone rubber converts to the tack free rubber like elastic state. Vulcanisation starts after the addition of the corss-linking agent NEUKASIL crosslinking A 18 blue. During vulcanisation NEUKASIL RTV 26 will solidify uniformly even in cases of thick wall sections and in completely closed systems. Vulcanisation is dependent on the temperature and is speeded up considerably by applying heat.

The vulcanisation time is approx. 24 hours at 25°C. Higher temperatures will accelerate the vulcanisation.

After these time the material can be taken out of the mould and has its final hardness.

Properties in the cross-linked state

Mechanical Properties

		with crosslinking agent A 18 blue
Mixing viscosity	mPa·s	approx. 25.000
Colour		blue
Density	g/cm³	approx. 1,2
Tensile strength DIN 53 504	Mpa	approx. 4,5
Elongation DIN 53 504	%	approx. 600
Tear strength ASTM D 624 B	N/mm	approx. 17
Shore-A-hardness DIN 53 505 Final hardness		30
Max. permissable operating temperature	°C	approx. 160
Linear shrinkage	%	approx. 0,1

Electrical properties

Specific resistance DIN 53 482	Ω cm	10^{15}
Dielectric strength DIN 53 481	KV/mm	22
Dielectric constant DIN 53 483	ε r	3,0
Dissipation factor tan δ DIN 53 483	60 HZ	0,008

Release Agents

If NEUKASIL RTV 26 is used as a material to make a mould then no mould release agents are needed.

If difficulties are experienced we recommend our NEUKADUR release agent N oder NEUKADUR release spray P 6.

The same release agents are used in the production of moulds consisting of more than one part and to prevent NEUKASIL RTV 26 from adering to itself. The surface of a part of a mould which has already been vulcanised must be treated with the release agent before the second part in cast.

Compatibility with other materials

NEUKASIL RTV 26 tolerates all other conventional model making materials such as wood, plaster of paris, metals und plastics and produces perfect copies of these products. Certain products prevent or delay vulcanisation of NEUKASIL RTV 26 which becomes noticeable by the surface being tacky or having air-bubbles. Amongst these products are conventional silicone rubber types NEUKASIL RTV 10 - 17, RTV 100 - 103, RTV 120 - 190 (condensation system),
organic rubbers, plasticisers, amines, heavy-metal compounds and substances containing sulphur. Under unfavourable circumstances it is also possible that surfaces that have been in contact with the aformentioned materials will affect the vulcanisation. In case of doubt it is best to carry out a trial on a reduced scale.

Storage

NEUKASIL RTV 26 and cross-linking agent A 18 blue must be stored in clean, closed vessels at temperatures of 25°C or less. Opened or broken containers should be well sealed after use. This is especially necessary for the cross-linking agent A 18 blue since these substances are susceptible to moisture and can produce an inflammable gas when in contact with acids and alkalies. As far as the cross-linking agent is concerned a slight sediment is deposited when a container is left standing a long time. This does not reduce the cross-linking agents effectiveness.

NEUKASIL RTV 26 has a storage life of 12 months and the corss-linking agent has a storage life of 6 months under suitable conditions.

Silicone rubber and the cross-linking agent are to be stirred before use.

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.