

Technical Data Sheet n° SIL 06 117 3 – March 2006
 Cancels and replaces SIL 02 120 3

Description The **RHODORSIL® RTV 3428 A&B** – are two component, silicone elastomers which cures at room temperature by a polyaddition reaction. This reaction can be accelerated by heat.

Applications

- Production of flexible moulds to be kept for long periods or where particularly accurate reproduction is required (ceramics, figurines, modelmakers, etc.).
- Production of thermal expansion formers for composite materials (the aeronautic industry, boat-building, etc.).

Advantages

- PART B: different colours available (see characteristics).
- Easy processing and curing.
- High tear strength, compared to conventional RHODORSIL RTV.
- Low linear shrinkage (when crosslinked at ordinary temperature).

Characteristics **1. Characteristics of the non-cured product**

Properties	RTV 3428 A	RTV 3428 B
Appearance	Liquid viscous	Liquid viscous
Color	Colorless	Pink, white, colorless
Specific gravity <i>(at 23 °C, g/cm³, approx.)</i>	1,1	1,1
Viscosity <i>(at 23 °C, mPa.s, approx.)</i>	25 000	1 000

2. Polymerization

RHODORSIL® RTV 3428 A.....100 parts
 RHODORSIL® RTV 3428 B.....10 parts

Properties	RTV 3428 A & B
Pot life <i>(at 23 °C, hours)</i>	1
Demoulding time <i>(at 23 °C, hours)</i>	16

Note: crosslinking by heating does not affect the properties of RHODORSIL® RTV 3428 A/B. However, dimensional changes do occur that should be kept into account.



3. Characteristics of the cross linked product

Measured after curing 24h at 23 °C:

Properties	RTV 3428 A&B
Hardness Shore A , (On a 6 mm thick specimen, approx.)	28
Tensile strength at break (mPa, approx.)	7.5
Elongation at break (%, approx.)	600
Tear strength (KN/m, approx.)	20
Linear shrinkage (%, 7 days after curing at 23 °C)	0.1

Processing

Remix each of the two components (part A and B) every time before using

1. Mixing of the two components

Add 100 parts of **RHODORSIL® RTV 3428 A** to 10 parts of **RHODORSIL® RTV 3428 B**. The two components may be intimately mixed either by hand or using a low-speed electric or pneumatic mixer to minimize the introduction of air into the mixture.

The viscosity of **RHODORSIL RTV 3428 A and B** can be reduce using **RHODORSIL 47V50**, add 5 to 10% of the quantity of **RHODORSIL RTV 3428 A**. This will make no significant change to the mechanical properties after polymerization. Up to 40% of **RHODORSIL 47V50** can be added without causing exudation.

2. Degassing

After mixing base and catalyst, it is recommended to eliminate entrapped air. If the processing is done with the help of a machine both parts are degassed before mixing.

The **RTV 3428 A&B** is degassed under a vacuum of 30 to 50 mbar. Under vacuum, the product expands 3 at 4 times its initial volume and forms bubbles on its surface. These bubbles will disappear gradually and the mixture will sink back down to its initial volume. Wait a few minutes to ensure complete degassing and then release the vacuum. The product is ready for use

Remark: release the vacuum several times improves the degassing. For easier degassing only fill a recipient to 1/3 of its height.

The product can be poured by gravity or under pressure. **RHODORSIL RTV 3428 A and B** is easier to use than normal RTV because the viscosity of the two components increases relatively slowly.



3. Cross linking

At 23°C, the moulds can be demoulded after 24h. In order to achieve the best possible performance levels from the moulds it is preferable to wait for 24 h before using them. If accelerated cure is desired, mild heat should be preferred. Conversely at lower temperature polymerization is much slower, at 20°C 36h may be necessary to complete cross-linking.

Be aware that contact with certain materials can inhibit the curing of this RTV:

- Natural rubbers vulcanized with sulphur
- Polycondensation RTV catalysed with metal salts
- PVC stabilizing agents
- Amine cured epoxies
- Sulphur containing clays.

In case of doubts, it is recommended to test the substrate by applying a small quantity of the mixed silicone on a restricted area. Take note that cross contaminations due to improperly cleaned tools or devices are a most frequent cause for inhibition.

Packaging

RHODORSIL RTV 3428 A and B is delivered in kits of :

– 1 kg part A + 0.100 kg part B

RHODORSIL RTV 3428 A is also available in 200 kg metal drums and 20 kg plastic drums accompanied by the corresponding 20 or 2 kg of **RHODORSIL RTV 3428 B**.

Storage and shelf life

When stored in its original unopened packaging, at a temperature of between – 5°C and + 30°C,

RHODORSIL® RTV 3428 A&B may be stored for up to 20 month from the date of manufacture clearly marked on the packaging.

Beyond this date, Rhodia Silcea SBU Silicones no longer guarantees that the product meets sales specifications.

Safety

Please consult the safety data sheet of **RHODORSIL® RTV 3428 A&B**.

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