

RHODORSIL® RTV 3040 A/B

Prototyping

Description	The RHODORSIL® RTV 3040 A & B – is a two component, silicone elastomer which polymerises at room temperature by a polyaddition reaction.
Applications	<ul style="list-style-type: none"> ▪ Quick prototyping ▪ RHODORSIL RTV 3040 A/B is a fluid moulding silicone designed for casting polyurethane, epoxy and polyester resins as well as wax and polyurethane foams
Advantages	<ul style="list-style-type: none"> ▪ Easy curing: RHODORSIL® RTV 3040 A/B polymerises at room temperature (23°C) in the absence of air and moisture. ▪ Excellent mechanical properties. ▪ Fast mixing and easy processing due to the low viscosity. ▪ Outstanding transparency. ▪ Accurate reproduction of detail.

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

Properties	RTV 3040 A	RTV 3040 B
Color	Transparant	Colorless
Appearance	Liquid viscous	Liquid slightly viscous
Viscosity (mPa.s, at 23°C, approx.)	45 000	4000
Density (at 23°C, approx.)	1,08	1,08

RHODORSIL® RTV 3040 A/B

2. Polymerization

RHODORSIL® RTV 3040 A..... 100 parts
 RHODORSIL® RTV 3040 B10 parts

Properties	RTV 3040 A/B
Viscosity (mPa.s, at 23°C, approx.)	40 000
Pot life (minute, at 23°C, approx.)	75
Demolding time (hours, at 23°C)	< 24

3. Characteristics of the cross-linked product

Measured after curing 24 hours at 23°C

Properties	RTV 3040 A&B
Shore A Hardness (Norme DIN 53505, approx.)	38
Tensile strength (MPa)	5,5
Elongation at break (%, approx.)	350
Tear strength (kN/m)	20
Linear shrinkage (%, 7 days after curing at 23°C)	< 0,1

Remark : Higher temperatures reduce pot life, lower temperature prolong pot life. If curing is accelerated by heat the properties of **RTV 3040 A/B** are not modified. However dimensional changes do occur during post curing which must be taken into account.

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 3040 A** to 10 parts of **RHODORSIL RTV 3040 B**. The two components are thoroughly mixed either using an electrical or pneumatic mixer, on a low speed setting so as to limit the inclusion of air in the mixture as well as the temperature rise.

RHODORSIL® RTV 3040 A/B**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 3040 A&B** is degassed under a vacuum of 30 to 50 mbar. Under vacuum pressure, the product will expand 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 within 5 minutes. Release the vacuum and repeat the operation a few minutes later.

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

3. Cross linking

The best curing conditions are at 23°C and 50% relative humidity. The use of products at higher temperatures and / or relative humidity levels will reduce the pot life and increase the setting rate. As opposed to this, lower temperatures and relative humidity levels will increase the pot life and decrease the setting time. It is recommended not to use the product at temperatures below 20°C; under these conditions, the final product performance levels will be difficult to achieve.

At 23°C and 50% relative humidity, 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.

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.

If doubts exist it's recommendable to run a quick test with a small quantity of material in order to assess compatibility.

Packaging

RHODORSIL® RTV 3040 A/B are available in the following packaging:

- KITS of **20Kg** :
 - Part A : **20 KG** plastic pails (18 pails per pallet)
 - Part B : **2 KG bucket** (18 buckets per pallet)
- KITS of **200 Kg** :
 - Part A : **200 KG** metal drum (2 drums per pallet)
 - Part B : **20 KG** pails (2 pails per pallet).

Storage and shelf life

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

RHODORSIL RTV 3040 A&B may be stored for up to 12 months from the date of manufacture clearly marked on the packaging.

Beyond this date, Bluestar Silicones no longer guarantees that the products meet sales specifications.

Part used drums should be released between each use.

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Safety

Consult the safety data sheet RHODORSIL® RTV 3040 A & B.

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