

BLUESILTM

RTV 3040 A&B, SB, HARD, LV, QC

Tool Box for Moulding Applications

Description

BLUESIL RTV 3040 A & B, SB, LV, HARD, QC is a two component silicone elastomer which is available in 5 versions with different features:

- A + **B** = standard grade
- A + **B SB** = self-bleeding grade
- A + **B LV** = low viscosity grade
- A + **B HARD** = higher hardness grade
- A + **B QC** = quick curing grade

Each version of **BLUESIL RTV 3040 A & B** crosslinks at room temperature by polyaddition reaction. The polymerisation can be accelerated by heat (max. 150 °C).

The silicone components are delivered as two viscous liquids, which once mixed and cured, transform into a transparent, elastic and resistant material. Polymerisation occurs without production of heat.

Examples of applications

- Reproduction of 3D objects in polyurethane, waxes, foams, epoxy, polyester etc.

Advantages

- accurate reproduction of details,
- very good transparency,
- exceptional mechanical properties,
- free matching within product range.

Characteristics

1. Characteristics of the non cured product

<i>Properties</i>	RTV 3040 A				
	RTV 3040 B	RTV 3040 SB B	RTV 3040 LV B	RTV 3040 HARD B	RTV 3040 QC B
Appearance	A: viscous liquid, B: low viscous liquid				
Colour	transparent				
Density [g/cm ³] at 23°C, approx.	1.08				
Viscosity [mPa·s] at 23°C approx.	A: 50000				
	B: 4000	B: 4000	B: 500	B: 500	B : 4000

Remark:

The A part contains the Pt catalyst; the B parts contain the SiH crosslinker.

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2. Polymerization

Properties	RTV 3040 A				
	RTV 3040 B	RTV 3040 SB B	RTV 3040 LV B	RTV 3040 HARD B	RTV 3040 QC B
Mixing Ratio A : B <i>parts by weight</i>	10 : 1				
Working Time <i>[min] at 23 °C, approx.</i>	75	75	120	75	50
Demoulding time <i>[h] at 23 °C</i>	< 24 h				20
Mixing Viscosity <i>[mPa·s] at 23 °C, approx.</i>	42000				

3. Characteristics of the cured product

Curing conditions: 60 minutes at 80 °C

Properties	RTV 3040 A				
	RTV 3040 B	RTV 3040 SB B	RTV 3040 LV B	RTV 3040 HARD B	RTV 3040 QC B
Hardness Shore A <i>DIN 53 505, approx.</i>	38	38	40	44	35
Tensile strength <i>DIN 53 504, specimen S3A, [N/mm²], approx.</i>	5.2	5.2	6	5.5	5.5
Elongation <i>DIN 53 504 specimen S3A, [%], approx.</i>	350	350	350	330	300
Tear strength <i>DIN 53 515, [N/mm] approx.</i>	19	19	20	22	20

Remarks:

Curing the silicone at elevated temperature has no influence on the final properties. Nevertheless, heating can alter the dimensions.

Processing

1. Mixing the two components

The components A and B are mixed by weight in the above indicated ratio.

The mixing can be carried out either by hand or using a low-speed electric or pneumatic mixer to minimise the introduction of air and to avoid any temperature increase.

It is also possible to use a special mixing and dispensing machine for the two silicone components. Further information is available upon request.

BLUESIL™ RTV 3040 A&B, SB, HARD, LV, QC**Processing****2. Degassing**

The mixture should be degassed preferably at 30 to 50 mbar to eliminate any entrapped air. If a dispensing machine is used, the two components are degassed separately prior to mixing.

The silicone mixture expands to 3 to 4 times of its initial volume and bubbles rise to the surface. The bubbles progressively disappear and the mixture returns to its initial volume after 5 to 10 minutes. Wait a few minutes to complete the degassing and then flash the vacuum. The silicone is ready for pouring, either by gravity or under low pressure.

Note: Flashing the vacuum once or twice accelerates the degassing. It is recommended to use a container with a high diameter / height ratio.

3. Polymerisation

The system polymerises at 23 °C. The curing may be slowed down at lower temperature and contrary accelerated by heat.

Contact with certain materials can inhibit the crosslinking. See list below:

- natural rubbers vulcanised with sulphur,
- RTV 2 silicone elastomers catalysed with metal salts, e.g. tin-compounds,
- PVC stabilised with tin salts and additives,
- epoxy resins catalysed with amines.

In case of doubts, it is recommended to test the substrate by applying a small quantity of the mixed silicone on a restricted area.

Packaging

BLUESIL RTV 3040 A is delivered in 20 and 200 kg drums.

BLUESIL RTV 3040 B, SB B, LV B, HARD B, QC B is delivered in 2 kg and 20 kg containers.

Storage and shelf life

When stored in their original unopened packaging, at a temperature of between -10°C and +30°C, the **BLUESIL RTV 3040 A & B, SB, HARD, LV, QC** 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 the sales specifications.

Safety

Please consult the Safety Data Sheets of **BLUESIL RTV 3040 A & B, SB, HARD, LV, QC**.

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