

BLUESILTM

RTV 3040 HARD A&B 1:1

High Performance Moulding Material

Description

BLUESIL RTV 3040 HARD A&B 1:1 is a two component silicone elastomer that 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>	BLUESIL RTV 3040 HARD A&B 1:1	
	A	B
Contains	Pt catalyst	SiH crosslinker
Appearance	Viscous liquid	
Colour	Transparent	
Density <i>[g/cm³] at 23 °C, approx.</i>	1,08	
Viscosity <i>[mPa·s] at 23 °C, approx.</i>	56000	56000

2. Polymerisation

<i>Properties</i>	BLUESIL RTV 3040 HARD A&B 1:1
Mixing Ratio A : B <i>parts by weight</i>	100 : 100
Working Time <i>[min] at 23 °C, approx.</i>	60
Demoulding time <i>[h] at 23 °C</i>	< 24
Mixing Viscosity <i>[mPa·s] at 23 °C, approx.</i>	56000

BLUESIL™ RTV 3040 HARD A&B 1:1**Characteristics (cont')****3. Characteristics of the cured product**

Curing conditions: 60 minutes at 80 °C

<i>Properties</i>	RTV 3040 HARD A&B 1:1
Hardness Shore A <i>DIN 53 505, approx</i>	37
Tensile strength <i>DIN 53 504, specimen S3A [N/mm²], approx.</i>	5.5
Elongation at break <i>DIN 53 504, specimen S3A [%], approx.</i>	400
Tear strength <i>DIN 53 515, [N/mm], approx.</i>	22

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.

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.

BLUESIL™ RTV 3040 HARD A&B 1:1

Packaging **BLUESIL RTV 3040 HARD A&B 1:1** is delivered in drums of 200 kg and 20 kg.

Storage and shelf life When stored in its original unopened packaging, at a temperature of between -10°C and +30°C, the **BLUESIL RTV 3040 HARD A&B 1:1** 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 product meets the sales specifications.

Safety Please consult the Safety Data Sheets of **BLUESIL RTV 3040 HARD A&B 1:1**.

Visit our website www.bluestarsilicones.com

 **EUROPE**

Bluestar Silicones France
21 Avenue Georges Pompidou
F69486 Lyon Cedex 03
FRANCE
Tel. (33) 4 72 13 19 00
Fax (33) 4 72 13 19 88

 **NORTH AMERICA**

Bluestar Silicones USA
2 Tower Center Boulevard
Suite 1601
East Brunswick, NJ 08816-1100
United States
Tel. (1) 732 227-2060
Fax. (1) 732 249-7000

 **LATIN AMERICA**

Bluestar Silicones Brazil Ltda.
Av. Maria Coelho Aguiar, 215
Bloco G – 1º andar
05804-902-Sao Paulo – SP-
Brazil
Tel. (55) 11 37477887

 **ASIA PACIFIC**

Bluestar Silicones Hong Kong
Trading Co. Ltd
29th Floor, 88 Hing Fat Street
Causeway Bay
Hong Kong
Tel. (852) 3106 8200
Fax (852) 2979 0241

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