

BLUESILTM

RTV 3221 – CATA 24H – CATA 6H

Description

BLUESIL RTV 3221 is a silicone elastomer which, after the addition of catalyst, cures at room temperature and leads to flexible and elastic material.

Examples of applications

Production of high-flexibility moulds used in the art and decoration field:

- Mouldings for single reproduction or for those limited to only a few examples: theatrical, movies industry and television special effects and statuary arts.
- Wax mouldings for artistic foundry work and fancy jewellery.
- Repeated mouldings: production of figurines.
- Mouldings in the craft and "Do it yourself" fields
- Building trade: pre-production of decorative items.

Advantages

- Good fluidity.
 - Excellent flexibility and its low modulus facilitate mould release.
 - Range of catalysts allows the **BLUESIL RTV 3221** to fulfil requirements for various applications:
 - **BLUESIL CATA 24H**: standard kinetics (24 hours demould)
 - **BLUESIL CATA 6H**: fast kinetics (6 hours demould)
- These catalysts have the advantage of being odourless.

Characteristics

1. Characteristics of the non cured product

<i>Properties</i>	BLUESIL RTV 3220 LV
Appearance	Beige
Viscosity (at 23 °C, mPa.s, ISO 3219, approx.)	15 000 ⁽¹⁾
Density (at 23 °C, approx.)	1.3

(1) Measured on a Brookfield viscometer, Spindle n° 4, Speed 5 r.p.m.

2. Polymerization

BLUESIL RTV 3221 100 parts
 BLUESIL CATA 24H 5 parts
 Or BLUESIL CATA 6H 5 parts

<i>Properties</i>	CATA 24H	CATA 6H
Specificity	Standard	Quick
Colour	Colourless	Colourless
Pot life (at 23 °C, 50 % relative humidity, minutes)	30	20
Demoulding Time (at 23 °C, 50 % relative humidity, hours)	24	6

BLUESILTM RTV 3221 – CATA 24H – CATA 6H**Characteristics (cont')****3. Characteristics of the cross linked product**

Measured after curing for 24 hours at 23 °C

<i>Properties</i>	CATA 24H	CATA 6H
Shore Hardness (<i>Shore A</i>)	18	17
Elongation at break (%)	230	240
Tensile strength (MPa)	1.6	1.5
Linear shrinkage (%)	< 1.2	< 1.2

Processing**Remix each of the 2 components (base and catalyst) every time before using.****1. Mixing of the two components**

To 100 parts of **BLUESIL RTV 3221** add 5 parts by weight of the selected catalyst. 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.

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 **BLUESIL RTV 3221** 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 6 hours for **BLUESIL CATA 6H** and 24 hours for **BLUESIL CATA 24H**. In order to achieve the best possible performance levels from the moulds, it is preferable to wait for 24 hours before using them. The definitive properties will be acquired after 3 days.

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Packaging

BLUESIL RTV 3221 and the appropriate catalysts are available in the following packaging:

- **Base:** 5 kg bucket (48 bucket per pallet)
- **Catalyst:** 250 gr bottle (48 bottles per box)
- **Base:** 20 kg plastic pail (12 pails per pallet)
- **Catalyst:** 1 kg bottle (12 bottles per box)
- **Base:** 200 kg metal drum (4 drums per pallet)
- **Catalyst:** 20 kg drum (2 drums per pallet)

Storage and shelf life

When stored in their original unopened packaging at a temperature of between – 5°C and + 30 °C, **BLUESIL RTV 3221** and **BLUESIL CATA 24H** and **6H** 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 resealed between each use.

Safety

Consult the Safety Data Sheets for **BLUESIL RTV 3221** and **BLUESIL CATA 24H** and **6H**.

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