

BLUESILTM

RTV 3318 SPU, 3330 SPU, 3335 SPU & CATA SPU

Description **BLUESIL RTV 3318 SPU, RTV 3330 SPU and RTV 3335 SPU** are silicone elastomers which, after the addition of catalyst **BLUESIL CATA SPU**, cure at room temperature by a polycondensation reaction, leading to a flexible and elastic material.

Examples of applications **BLUESIL RTV 3318 SPU, RTV 3330 SPU and RTV 3335 SPU** have been specifically designed for the production of molds dedicated to polyurethane resins casting, for series production.
The use of the products can be suggested also for molds where other replication materials are casted (such as e.g. wax, plaster...).

Advantages

- Very high resistance to polyurethane resins, even to those curing by a strong exothermic reaction.
- Ease of processing thanks to the good flowing behaviour.
- High mechanical resistance.
- Excellent reproduction fidelity of each detail.
- Easy demolding thanks to the intrinsic self-releasing properties of silicone elastomers.
- Possibility to choose between three different hardness levels: 18 - 30 - 35 Shore A.

Characteristics **Principle of crosslinking**
BLUESIL RTV 3318 SPU, RTV 3330 SPU and RTV 3335 SPU are two-component siliconic elastomers which, once mixed with **BLUESIL CATA SPU**, cure by a polycondensation reaction.

1. Characteristics of the non cured products

<i>Properties</i>	3318 SPU	3330 SPU	3335 SPU	CATA SPU
Aspect	Viscous liquid	Viscous liquid	Viscous liquid	Liquid
Color	Beige	Whitish	Whitish	Pale yellow
Viscosity (at 23°C, mPa.s, approx.)	25 000	35 000	50 000	/
Density (g/ml, approx)	1.25	1.25	1.35	1.0

2. Polymerization

BLUESIL RTV 3318 SPU or RTV 3330 SPU or RTV 3335 SPU 100 parts
BLUESIL CATA SPU 5 parts

BLUESIL™ RTV 3318 SPU, 3330 SPU, 3335 SPU & CATA SPU

Characteristics (cont')

<i>Properties</i>	3318 SPU	3330 SPU	3335 SPU
Color	Beige	Whitish	Whitish
Pot life (At 23°C, 50 % relative humidity, minutes, approx.)	150	150	150
Demolding time (At 23°C, 50 % relative humidity, hours, approx.)	24	24	24

3. Characteristics of the cross linked products

Measured after curing for 96 hours at 23°C and relative humidity 50%

<i>Properties</i>	3318 SPU	3330 SPU	3335 SPU
Hardness Shore A (On a 6 mm thick specimen, approx.)	18	30	35
Tensile strength at break * (MPa, approx.)	2.5	3.0	3.5
Elongation at break * (%, approx.)	350	350	250
Tear strength # (KN/m, approx.)	12	15	9
Specific gravity (g/ml, approx.)	1.25	1.25	1.35

*ASTM D412 #ASTM D624/C

Processing

Remix each of the two components (base and CATA SPU) every time before using.

1. Mixing of the two components

To 100 parts of **BLUESIL RTV 3318 SPU**, **RTV 3330 SPU** or **RTV 3335 SPU** add 5 parts by weight of **BLUESIL CATA SPU**.

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 **BLUESIL RTV 3318 SPU**, **RTV 3330 SPU** or **RTV 3335 SPU** with **BLUESIL CATA SPU**, it is recommended to eliminate entrapped air.

The catalysed **BLUESIL RTV 3318 SPU**, or **RTV 3330 SPU** or **RTV 3335 SPU** is degassed under a vacuum of 30 to 50 mbar. Under vacuum, the product expands 3 to 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 few minutes. Then the vacuum can be released.

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

BLUESIL™ RTV 3318 SPU, 3330 SPU, 3335 SPU & CATA SPU**Processing (cont')****3. Cross linking**

The best curing conditions are at 23°C and 50% relative humidity. The use of the products at higher temperatures and / or relative humidity levels will reduce the pot life and increase the curing rate. As opposed to this, lower temperatures and relative humidity levels will increase the pot life and decrease the curing rate.

It is suggested not to place the catalysed product, during or after crosslinking, to temperatures above 50°C.

At 23°C and 50% relative humidity, the moulds of **BLUESIL RTV 3318 SPU**, **RTV 3330 SPU** or **RTV 3335 SPU** can be demoulded after 24 hours, with no dependence on the mold thickness. In order to achieve the best possible performance levels from the moulds, it is preferable to wait for 4 days before using them.

4. How to use

Apply **BLUESIL RTV 3318 SPU**, **RTV 3330 SPU** or **RTV 3335 SPU** mixed with **BLUESIL CATA SPU** directly on the model by casting, trying to avoid bubbles and voids.

Models can be made of several materials, stones, concrete, metal, etc. Even though silicone is naturally not adhering to most materials, it is always recommendable to prepare the model to avoid any risk of the silicone sticking and so damaging the model. Remove dust and apply a pore filler like soapy water, waxes diluted in xylene, etc.

Part used drums should be resealed between each use.

Packaging

BLUESIL RTV 3318 SPU is delivered in following packaging:

- 200 kg drum
- 20 kg pail

BLUESIL RTV 3330 SPU is delivered in following packaging:

- 200 kg
- 25 kg pail

BLUESIL RTV 3335 SPU is delivered in following packaging:

- 25 kg pail

BLUESIL CATA SPU is delivered in following packaging:

- 1 kg bottle

Storage and shelf life

When stored in their original packaging at a temperature below of between – 5°C and +30°C, **BLUESIL RTV 3318 SPU**, **RTV 3330 SPU**, **RTV 3335 SPU** and **BLUESIL CATA SPU** may be stored for up to 12 months from their date of manufacture.

Comply with the storage instructions and expiry date marked on the packaging.

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

Safety

Consult the Safety Data Sheets for **BLUESIL RTV 3318 SPU**, **RTV 3330 SPU**, **RTV 3335 SPU** and **BLUESIL CATA SPU**.

BLUESIL™ RTV 3318 SPU, 3330 SPU, 3335 SPU & CATA SPU

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

Warning to the users

The information contained in this document is given in good faith based on our current knowledge. It is only an indication and is in no way binding, particularly as regards infringement of or prejudice to third party rights through the use of our products. BLUESTAR SILICONES guarantees that its products comply with its sales specifications. This information must on no account be used as a substitute for necessary prior tests which alone can ensure that a product is suitable for given use. Users are responsible for ensuring compliance with local legislation and for obtaining the necessary certifications and authorisations. Users are requested to check that they are in possession of the latest version of this document and BLUESTAR SILICONES is at their disposal to supply any additional information.