

## CALSIL Machinery and Equipment

### RTV PC 5431



#### 1. Product Description:

Calsil<sup>®</sup> RTV PC5431 is a pourable bi-component RTV-2 silicone rubber, vulcanizing at room temperature with a poly-condensation process using our calsil<sup>®</sup> CAT. 54.

#### 2. Key Properties

- It gives a perfect replica of the original item
- Highly resistant in all circumstances and thermo-stable
- For low viscosity and quick cure it can be used in spray applications to form a protective layer

#### 3. Typical Properties (not for sales specifications, please contact us prior to writing sales specs)

| Physical Properties                                      | Units             | Values  |
|--|-------------------|---|
| Appearance   |                   | Viscous liquid  |
| Colour   |                   | beige   |
| Odour  |                   | odourless   |
| Solubility   |                   | Not mixable in water, dispersible in most of solvents |
| Specific gravity   | g/cm <sup>3</sup> | 1.20 ± 0.02   |
| Viscosity  | mPa.s             | 6000  |
| <b>Curing Properties with CALSIL<sup>®</sup> CAT. 54</b> |                   |   |
| Mix Ratio  |                   | 100:5   |
| Working time   | min               | 3 ÷ 5   |
| Setting time   | h                 | 15  |
| <b>Properties of the cross linked product:</b>           |                   |   |
| Hardness 24H   | Sh A              | 20 ± 2  |
| Elongation   | %                 | 150 ÷ 250   |
| Tensile strength   | MPa               | 1.5 ± 0.3   |
| Tear strength  | kN/m              | 2.5 ± 2.0   |
| Shrinkage  | %                 | < 0.5   |

#### 4. How to Use

After you have homogenized the silicone rubber, weigh the required quantity, add 5% catalyst and mix by hand and by a mechanical mixer. To reduce air bubbles, we suggest a vacuum de-airing before pouring the silicone rubber, compatible with the curing times. Before casting, vacuum degassing (20-30 mm of mercury) is recommended. Release the vacuum several minutes.

To achieve this, the container should allow an expansion of the fluid at about 3-5 times the initial level. Avoid prolonged degassing too, so as not to volatilize certain components required for curing. Vulcanization is influenced by temperature and moisture. The best curing conditions are at 23°C and 50% relative humidity. The use of products at higher temperature to this, lower temperatures and lower relative humidity levels will increase pot life and setting time. If the amount of catalyst is increased from 5% to 6-7%, the curing will accelerate, but shrinkages will increase too.

It is recommend non to use the product at temperatures lower than 20°C. in these conditions, the final product performance will be difficult to achieve. We suggest to work at temperatures less than 35-40°C to avoid big shrinkages. At 23°C and 50% relative humidity, the demoulding happens after 16-24 hours. The definitive properties will be reached after 3 days.

*Other recommendations:*

- we recommend to clean the sample to copy from dust and dirt. If the sample is made of glass or ceramic, it's possible that the silicone rubber sticks to the model. To avoid it, we recommend to use the release agent: CALSIL® R-AG1.

## 5. Handling

This document does not contain safety precautions. Before handling this material, please read the Material Safety Data Sheet, check the label on the container, and conform to the safety, physical and hazard guidelines and precautions. The Material Safety Data Sheet is available from your nearest CALDIC office.

## 6. Storage and Shelf Life

The product, when stored under appropriate conditions, is stable and usable for 12 months. We suggest to keep the products in their original packaging, well-closed at a temperature between +7°C and +27°C, in well-aired places. Mixing it with a clean shaker before use.

## 7. Packaging

CALSIL® RTV PC5431 is available in pails kg 20 and kg. 5.  
CALSIL® CAT 54 is available in bottles kg. 1 and gr. 250.

## 8. Restrictions

This ingredient is solely proposed in industrial applications.

It is not suitable to be used in cosmetic, medical, human injection, pharmaceutical or food applications.

## 9. Limited Warranty PLEASE READ CAREFULLY

The information herein is offered in good faith. It is believed to be accurate at the time of shipment.

It should not be used as a substitute for the customer's test, the customer bears the responsibility to ensure that the product matches the intended application is safe and achieves the desired benefits.

The product warranty is limited to the refund value of the purchase or the replacement only when it is demonstrated that the product is out of the agreed sales specifications.

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For more information, please contact our nearest office:

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