

## CALSIL Machinery and Equipment

### RTV PA12 – PA22 – PA25 – PA27



#### 1. Product Description:

Calsil® RTV PA 12-22-25-27 are pourable bi-component RTV-2 silicone rubber, vulcanizing at room temperature with a poly-addition process without shrinkage. (Mix ratio 1:1 for all)

#### 2. Key Properties

- High mechanical properties and low viscosity give very flexible and resistant moulds,
- High details reproduction
- Furthermore they are biocompatible, non-toxic and they don't release any substances both during and after the curing

#### 3. Applications

They are suitable for the reproductions of wax, plaster, resins models. They are also used in the pad printing field.

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

Properties	Unit	Value			
		RTV PA12	RTV PA22	RTV PA25	RTV PA27
Colour	-	Orange	Light blue	Red	Yellow
Viscosity	mPa.s	6500	6000	7000	7500
Specific gravity	g/cm <sup>3</sup>	1.12	1.14	1.15	1.16
Working time	min	30	60	70	60
Setting time	H	2	4	5	4
<b>Properties of the cross linked product:</b>					
		RTV PA12	RTV PA22	RTV PA25	RTV PA27
Mix ratio		1:1	1:1	1:1	1:1
Hardness 24H	Sh A	13	22	25	30
Elongation	%	550	450	450	450
Tensile strength	MPa	3.0	4.0	4.0	5.0
Tear strength	kN/m	16.0	20.0	20.0	15.0
shrinkage	%	< 0.1	< 0.1	< 0.1	< 0.1

#### 5. How to use

Make sure that the model to duplicate is perfectly clean and dry. Before using shake well the bottles of part A and B. Weigh the same quantity of part A and B. if the proportions aren't exactly, the curing times and the final properties can be different. Mix about a minute until a homogeneous colour is obtained, then pour the mixture on the model to duplicate. To reduce air bubbles, we suggest a vacuum de-airing treatment 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 times. 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.

The curing speed is influenced by the temperature. we recommend to work in a isothermal place at 23°C. Higher temperatures accelerate the curing time, lower temperatures reduce them. The cured silicone can be demoulded after the time shown on the label (Setting Time). In order to reach the best performance of the moulds, we suggest to wait for 24 hours before using them.

*Use of Thixotropic agent:*

After you have homogenized the silicone rubber, add 3% Thixotropic agent and mix in a suitable container for 3-5 minutes. You get a very viscous mass, which can be applied in vertical. With a brush or a spatula, spread the thixotropic silicone rubber to form a layer of 5-10 mm. if necessary, repeat after 1-2 hours (before the silicone rubber is completely cured) to obtain a mould with good strength. (20-40mm).

*Other recommendations:*

- Some inhibitions to vulcanization process may occur when the silicone rubber get in contact with amines, plastilines, metal salts, sulphides, tin catalysts and poly-condensation silicone rubbers. To avoid any inhibition problems, we recommend a preliminary test for the compatibility of the silicone on the material to duplicate.

## 6. 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.

## 7. 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.

## 8. Packaging

CALSIL® RTV PAXx part A is supplied in pail kg 20 and cans kg 5.  
CALSIL® RTV PAXx part B is supplied in pail kg. 20 and cans kg. 5

## 9. Restrictions

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

## 10. 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.
- CALSIL® is a registered trademark of CALDIC BV. All rights reserved.

For more information, please contact our nearest office:

[calsil@caldic.com](mailto:calsil@caldic.com)

[www.calsilicones.com](http://www.calsilicones.com)