

CRISTAL RUBBER + PT CURE

Liquid silicon rubber for casting.

This new kind of silicon rubber is a valid help to make the moulds, because when the object to reproduce is very detailed, it could be difficult to realize a two-parts mould.

Using Cristal Rubber, you can obtain a two-parts mould by a single casting of rubber. Thanks to its transparency, the object inside is perfectly visible, and the mould can be easily cut in two parts.

Cristal rubber is a polyaddition rubber, and has a cold cure by adding 10% of Pt Cure catalyst.

Batch the two components by weight. If an accuracy scale is not available, you can use a syringe and batch by volume: 1cc = 1 gr. To dose also the rubber in volume, note that its specific weight is 1.

Blend carefully the two components with a long, narrow spittle, scraping the bottom and all the container, to obtain a homogeneous blend, and slowly, to avoid air bubbles.

Components properties:

	COMP. A	COMP. B
COLOUR	Transparent	Translucent
APPEARANCE	Viscous liquid	Liquid
SPECIFIC WEIGHT	1,04	1,04
VISCOSITY	<> 10.000	<> 1.000

Ratio A/B

100 gr A / 10 gr B

Blend properties:

COLOUR	Translucent
POT-LIFE (23 C°)	90 minutes
COMPLETE CURE (23 C°)	24 hours

Properties after vulcanization:

Hardness Shore A 24 hours (DIN 53505)	30 points
Breaking stress (DIN 53504)	> 5MPa
Tear strength (DIN 53515)	> 18 kN/m
Breaking elongation (DIN 53504)	350%
Linear shrinking	< 0,1%
Thermal expansion	4.10 -4 cm/cm C°
Thermic tight	> 180 C°

Benefits:

Low linear shrinking
No release of toxic matters before, during and after use
Good mechanical properties

Storage:

Between -5/+30 C° , in original packs, 12 months.

Instructions to make the mould:

Take a container to place the object to reproduce (i.e. plastic or aluminium boxes)

Stick a support under the object, to create the pouring channel, and fix it with plasticine on the bottom of the container. Do not use any detaching material: silicon rubbers do not stick.

Cast slowly the rubber, to allow the escape of air bubbles, even using a long needle to help this process. For particular cases, the use of a vacuum bell is recommended.

For all tridimensional objects, without pedestal, follow these hints:

Prepare a little quantity of blend and pour it creating a 1cm layer.

Wait some time for the rubber hardens a little.

Place the object upon the layer of rubber, make sure it is well settled, and then pour the remaining quantity of rubber to cover the object.

Cristal Rubber has a quick cure, comparing it to the other rubbers.

At 20 C° the vulcanization starts after 2 hours, and ends in 6 – 8 hours, so if this time does not allow the escape of all the air bubbles, put the container with the rubber in a colder place (i.e. a fridge), because a lower temperature slackens the vulcanization.

After the complete cure, take off the rubber mould from the container, and fix the line to cut the mould in two parts. For all tridimensional moulds, also incise the pouring channels and air flow- off, in the right places.

General warnings:

Cristal rubber is a polyaddition rubber, so it must be kept away from some substances which could hinder the vulcanization.

Firstly, do not use containers or tools already used with normal condensation rubbers, as they are totally incompatible.

Besides, make sure that the original object does not contain the following substances, even in the littlest quantity:

- Condensation silicon rubbers or catalysts.
- Sulphur and derivatives.
- Poli- neoprene glues
- Polyester matters such as resins, putties and mastics.
- Plasticine (except wax plasticine)
- PVC
- Tin
- Amines
- Heavy metals
- Natural and synthetic rubbers.

If the original object to reproduce contains one or more of those substances, cover it with a veil of wax, to separate it from the rubber.



Ideas and creative solutions

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