

Basis	High strength silicone mouldmaking rubber
Resin	Silicone 25
Hardener	Curing Agent 25 -24
Colour	white

Applications

- Casting of objects of art
- Casting of figures
- Casting of rocks
- Casting or gelcoat
- Laminating moulds for polyester

Properties

- non adhesive properties
- high elasticity
- highly detailed forming
- excellent mechanical properties
- condensation curing

Processing data

Curing Agent		Silicone 25	Curing Agent 25-24	Curing Agent 25-6	Curing Agent 25-2	Curing Agent 25-R
Density at 25°C (g/cm³)		1,20				
Colour		white	clear	clear	red	clear
			Standard	fast	very fast	resin-resistant
Mixing ratio	p.b.w.		100 : 5	100 : 5	100 : 5	100 : 5
Viscosity	mPas		20.000	22.100	36.400	20.000
Pot life at 23°C	min		80 – 90	15 – 20	4 – 6	80 - 90
Curing time max.	h		24	6	2	24

The values are measured after a curing 2 days at 23°C.

Physical data

Shore A hardness			25	28	25	27
Tensile strength	MPa		4,0	4,2	4,2	4,3
Tear resistance	KN/m		21	26	25	25
Elongation at break	%		450	440	438	490
Linear shrinkage	%		<0,5 – 0,6	<0,5 – 0,6	<0,5 – 0,6	<0,5 – 0,6

Sales unit

Silicone 25	5,000 kg / 20,000 kg / 200,000 kg
Curing Agent 25-24	0,250 kg / 1,000 kg
Curing Agent 25-6	0,250 kg / 1,000 kg
Curing Agent 25-2	0,250 kg / 1,000 kg
Curing Agent 25-R	0,250 kg / 1,000 kg

Processing Instructions

The surface of the original should be clean and free of loose material. If necessary, and in particular with porous substrates, use a suitable release agent such as petroleum jelly or soap solution.

Thoroughly stir **Silicone 25 Base** before use, as filler separation may occur upon prolonged storage. Weigh 100 parts of **Silicone 25 Base** and 5 parts of **Curing Agent 25-24** in a clean container. Mix together until the curing agent is completely dispersed in the base. Hand or mechanical mixing can be used, but do not mix for an extended period of time or allow the temperature to exceed 35°C. Mix suitably small quantities to ensure thorough mixing of base and curing agent. It is strongly recommended that entrapped air be removed in a vacuum chamber, allowing the mix to completely expand and then collapse. After a further 1-2 minutes under vacuum, the mix should be inspected and can be used if free of air bubbles. A volume increase of 3-5 times will occur on vacuum de-airing the mixture, so a suitably large container should be chosen.

Caution:

Prolonged vacuum will remove volatile components from the mix and may result in poor thick section cure and non-typical properties.

Note:

If no vacuum de-airing equipment is available, air entrapment can be minimized by mixing a small quantity of **Silicone VP 25 Base** and **Curing Agent 25-24**, then using a brush, painting the original with a 1-2 mm layer. Leave at room temperature until the surface is bubble free and the layer has begun to cure. Mix a further quantity of base and curing agent and proceed as follows to produce a final mold.

Pour the mixed **Silicone 25 Base** and **Curing Agent 25-24** as soon as possible onto the original, avoiding air entrapment. The catalyzed material will cure to a flexible rubber within 24 hours (or faster when **Curing Agent 25-6** or **Curing Agent 25-2** are used) at room temperature (22-24°C) and the mold can then be separated from the material. If the working temperature is significantly lower, the cure time will be longer. If the room temperature or humidity is very high, the working time of the catalyzed mixture will be reduced. The final mechanical properties of the mold will be reached within 7 days.

Reproduction of vertical surfaces if a skin mold is required of a vertical object or surface and cannot be made by normal pouring techniques, the catalyzed mixture can be made nonflowable by the addition of **SILASTIC™ Thixo Additive**.

- 1) Prepare the original as described earlier.
- 2) Brush the original with a thin layer of catalyzed mixture. Repeat the operation when the first layer has started to cure, to achieve a coating thickness of >2 mm. Leave to cure at room temperature until the material is tacky.
- 3) Prepare a new catalyzed mixture of **Silicone 25 Base** and add 3% by weight of **SILASTIC™ Thixo Additive** and mix thoroughly until a paste consistency is reached. De-airing of the mixture is not required.
- 4) Using a spatula, cover the coated original with the thixotropic coating until all undercuts are filled; leave to cure for 24 hours, at room temperature.
- 5) Construct a support mold using polyester resin or plaster and allow to set in contact with the silicone coating. Carefully remove the support mold. Peel the rubber off the original and place in the support mould.

In General

Silicone 25 Mouldmaking Rubber is a two-component material consisting of **Silicone 25 Base** which when mixed with a **Curing Agent 25-24** serie, cures at room temperature by a condensation reaction. A range of materials can be cast into the cured silicone mold: plaster, polyurethane and polyester resins are materials typically used.

Other Curing Agents

The standard curing agent for **Silicone 25 Base** is **Curing Agent 25-24**.

For special requirements there are a range of additional curing agents:

- **Curing Agent 25-6** for demolding after 5 hours.
- **Curing Agent 25-2** for demolding after 2 hours.
- **Curing Agent 25-R** for improved mould life with epoxy resins.

Use at high temperatures

Some moulds produced from condensation cure silicone rubbers can degrade when exposed to temperatures above 150°C over a period of time or when totally confined in storage at high ambient temperatures. This can result in softening and loss of elastic properties.

Resistance to casting materials

The chemical resistance of fully cured **Silicone 25** is excellent, and similar to all condensation cure silicone elastomers. It should be noted however that ultimately, resins and other aggressive casting materials will attack silicone molds, changing physical properties, surface release and possibly mold dimensions. Molds should be checked periodically during long production runs.

Note:

Silicone 25 is an industrial product and must not be used in food molding, dental and human skin molding applications.

Storing

Storage at or under 32°C in closed original containers.

Safety Measure

Please follow the precaution instructions of the Government Safety Organisation of the chemical industry when working with this material. Please follow safety advices.

Waste Disposal

According to arrangement with local authorities cured material can be disposed as domestic or commercial waste. Non-cured products are waste which is subject to inspection and has to be disposed accordingly. In case of further questions please do not hesitate to contact our Department for Product Safety.

The instructions and recommendations are given in good faith and are based on long experience and careful tests. Since the conditions of use are beyond our control, and due to versatility of applications and working methods, we can't give any guarantee. All information are non-binding and are no guarantee for special characteristics or properties of the product. Despite information given from **ebalta** the customer has to make his own tests regarding applications and processing. If any special warranty is requested, written agreement on this subject is essential.