DOW CORNING

SILASTIC® 3120 Base and DOW CORNING® 1 Catalyst

FEATURES

- Outstanding release properties
- High flowability and long working time
- High hardness
- Can be used for high temperature casting applications
- Excellent heat stability

General purpose silicone moldmaking rubber

APPLICATIONS

- SILASTIC 3120 is suited for the detailed reproduction of figurines, art objects and similar items. It is particularly recommended where no deep undercuts or complex shapes are present and where maximum heat stability is required.

TYPICAL PROPERTIES

Specification writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales representative prior to writing specifications on this product.

Property	Unit	Value
Base and Catalyst		
Mix ratio		Standard/100:10
Mixed viscosity	mPa.s	28,000
Color		Red
Working time of catalyzed mixture at 23°C (73.4°F)[1]	minutes	120-180
Curing time	hours	24
Cured for 3 days at 23°C (73.4°F)		
Hardness (Shore A)		60
Tensile strength	MPa	4.8
Elongation at break	%	130
Tear strength	kN/m	<5
Relative density at 25°C (77°F)		1.45
Linear shrinkage	%	0.4-0.6

1. The ratio of base: catalyst can be reduced to 100:5 parts by weight, giving a working time of 3 - 4 hours and a cure time of 48 hours. Other properties are not affected.

DESCRIPTION

SILASTIC 3120 Moldmaking Rubber is a two-component material consisting of SILASTIC 3120 Base, which when mixed with DOW CORNING 1 Catalyst cures at room temperature by a condensation reaction. A range of materials can be cast into the cured silicone mold: plaster, polyurethane, polyester and other reactive resins are materials typically used and especially low melting point metal alloys.

HOW TO USE

Substrate preparation

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.

Mixing

Thoroughly stir SILASTIC 3120 Base before use, as filler separation may occur upon prolonged storage. Weigh 100 parts of SILASTIC 3120 Base and 5-10 parts DOW CORNING 1 Catalyst according to the working and

cure times required in a clean container. Mix together until the catalyst is completely dispersed in the base. Hand or mechanical mixing can be used, but do not allow the temperature to exceed 35°C (95°F). Mix suitably small quantities to ensure thorough mixing of the base and catalyst.

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 base and catalyst, then using a brush, painting the original with a 1-2mm 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 catalyst and proceed as follows to produce a final mold.

Pouring the mixture and curing

Pour the mixed base and catalyst as soon as possible onto the original, avoiding air entrapment. The catalyzed material will cure to a flexible rubber within 24-48 hours at room temperature (22-24°C/ 71.6-75.2°F) according to the amount of catalyst used and the mold can then be removed. 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.

ADDITIONAL INFORMATION

Use at high temperatures

Some moulds produced from condensation cure silicone rubbers can degrade when exposed to temperatures above 150°C (302°F) 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. SILASTIC 3120 extends both the temperature range and time before this breakdown occurs. Please contact a Dow Corning distributor for further advice.

Resistance to casting materials

The chemical resistance of fully cured SILASTIC 3120 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:

SILASTIC 3120 is an industrial product and must not be used in food molding, dental and human skin molding applications.

HANDLING PRECAUTIONS

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE FROM YOUR LOCAL DOW CORNING SALES REPRESENTATIVE.

USABLE LIFE AND STORAGE

When stored at or below 32°C (89.6°F) in the original unopened containers, SILASTIC 3120 Base has a usable life of 24 months and DOW CORNING 1 Catalyst has a usable life of 12 months from the date of production.

PACKAGING

SILASTIC 3120 Base is available in 5kg and 20kg containers.

DOW CORNING 1 Catalyst is available in 0.5kg and 18.1kg containers.

SILASTIC 3120 Base with DOW CORNING 1 Catalyst is also available as a 1.1kg kit.

LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

HEALTH AND ENVIRONMENTAL INFORMATION

To support customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Health, Environment and Regulatory Affairs specialists available in each area.

For further information, please consult your local Dow Corning representative.

WARRANTY INFORMATION - PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that Dow Corning's products are safe, effective, and fully satisfactory for the intended end use. Dow Corning's sole warranty is that the product will meet the Dow Corning sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. Dow Corning specifically disclaims any other express or implied warranty of fitness for a particular purpose or merchantability. Unless Dow Corning provides you with a

specific, duly signed endorsement of fitness for use, Dow Corning disclaims liability for any incidental or consequential damages. Suggestions of use shall not be taken as inducements to infringe any patent.