

SILASTIC® 3496, 3497 and 3498 Mold Making Bases and SILASTIC® 81 Curing Agents (EUR)

FEATURES

- High flowability and long working time for complex molds
- Outstanding release and high tear resistance for intricate originals and deep undercuts
- High elasticity, for easy removal of complex parts
- Choice of bases and curing agents for various rubber properties

High strength silicone mold making rubbers with improved mold life for polyester resins

APPLICATIONS

- High strength silicone mold making rubber developed for the detailed reproduction of figurines, art objects and similar items.

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		
Bases		SILASTIC 3496	SILASTIC 3497	SILASTIC 3498
Color		Off-White	Off-White	Off-White
Viscosity	mPa.s	18,600	24,800	27,200
Rel. density at 25°C (77°F)		1.16	1.22	1.24
Curing Agents		SILASTIC 81-T	SILASTIC 81-R	SILASTIC 81-F
Color		Clear	Clear	Clear

Typical properties of Base and Curing Agent mixture and of cured material can be found in Table 1.

DESCRIPTION

SILASTIC 3496, 3497 and 3498 Mold Making Rubbers are two-component materials consisting of a base, which when mixed with SILASTIC 81-T, 81-F or 81-R Curing Agent, cures at room temperature by a condensation reaction.

The materials are formulated to have an improved mold life for polyester resins.

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 3496, 3497 or 3498 Base before use, as filler separation may occur upon prolonged storage.

Weigh 100 parts of SILASTIC 3496, 3497 or 3498 Base and 5 parts SILASTIC 81-T, 81-R or 81-F Curing Agent into 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 (95°F).

Mix suitable 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 if free of air bubbles, can then be used. 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 curing agent, then using a brush, painting the original with a thin 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.

Pouring the mixture and curing

Pour the mixed base and curing agent as soon as possible onto the original, avoiding air entrapment. The catalyzed material will cure to a flexible rubber and the mold can then be removed (see table of typical properties for details). If the working temperature is significantly lower than 23°C (73.4°F), 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 will be reached within 7 days.

Use at high temperatures

Some molds 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.

Resistance to casting materials

The chemical resistance of fully cured SILASTIC 3496, 3497 or 3498 is excellent. The materials are formulated to have an improved mold life for polyester resins. 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.

SILASTIC 3496, 3497 and 3498 are industrial products 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 material safety data sheet is available on the Dow Corning website at www.dowcorning.com. You can also obtain a copy from your local Dow Corning sales representative or Distributor or by calling your local Dow Corning Global Connection.

USABLE LIFE AND STORAGE

When stored at or below 32°C (89.6°F) in the original unopened containers, SILASTIC 3496, 3497 or 3498 have a usable life of 12 months from the date of production.

SILASTIC 81-T has a usable life of 12 months, SILASTIC 81-R has a usable life of 9 months and SILASTIC 81-F has a usable life of 7 months from the date of production.

PACKAGING

SILASTIC 3496, 3497 or 3498 Base are available in 5kg, 20kg or 200kg containers.

SILASTIC 81 series Curing Agents are available in 0.25kg, 1kg and 10kg containers.

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 Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our website, www.dowcorning.com or consult your local Dow Corning representative.

**LIMITED 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 customers' tests to ensure that Dow Corning's products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

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.**

**DOW CORNING DISCLAIMS
LIABILITY FOR ANY
INCIDENTAL OR
CONSEQUENTIAL DAMAGES.**

WE HELP YOU INVENT THE
FUTURE.™

www.dowcorning.com

Table 1: Typical properties of Base and Curing Agent mixture and of cured material after 7 days at 23°C (73°F)

SILASTIC 3496 Base				
		3496 / 81-T	3496 / 81-R	3496 / 81-F
Base and Curing Agent mixture (100:5 by weight)				
Mixed viscosity	mPa.s	13,400	12,800	14,200
Working time	min	120-180	120-180	60-90
Curing time	hours	24	24	8
Cured for 7 days at 23°C (73°F)				
Hardness (Shore A)		19	15	16.5
Tensile strength	MPa	3.3	3.6	3.7
Elongation at break	%	350	470	440
Tear strength	kN/mm	25	23	27
Linear shrinkage	%	0.2 - 0.5	0.2 - 0.5	0.2 - 0.5
SILASTIC 3497 Base				
		3497 / 81-T	3497 / 81-R	3497 / 81-F
Base and Curing Agent mixture (100:5 by weight)				
Mixed viscosity	mPa.s	17,600	16,600	18,000
Working time	min	120-180	120-180	60-90
Curing time	hours	24	24	8
Cured for 7 days at 23°C (73°F)				
Hardness (Shore A)		27	22	24.5
Tensile strength	MPa	4.1	4.6	4.5
Elongation at break	%	330	450	400
Tear strength	kN/mm	31	32	27
Linear shrinkage	%	0.2 - 0.5	0.2 - 0.5	0.2 - 0.5
SILASTIC 3498 Base				
		3498 / 81-T	3498 / 81-R	3498 / 81-F
Base and Curing Agent mixture (100:5 by weight)				
Mixed viscosity	mPa.s	18,200	16,400	18,200
Working time	min	120-180	120-180	60-90
Curing time	hours	24	24	8
Cured for 7 days at 23°C (73°F)				
Hardness (Shore A)		32	27	29.5
Tensile strength	MPa	4.3	4.7	5
Elongation at break	%	300	410	390
Tear strength	kN/mm	27	35	34
Linear shrinkage	%	0.2 - 0.5	0.2 - 0.5	0.2 - 0.5