



Technical Data Sheet

SILASTIC™ RTV-3496 Mould-Making Base **SILASTIC™ RTV-3497 Mould-Making Base** **SILASTIC™ RTV-3498 Mould-Making Base** **SILASTIC™ RTV-3081 Mould-Making Curing Agent**

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

Features & Benefits

- 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

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.

Property	Unit	Result		
Bases		SILASTIC™ RTV-3496 Mould-Making Base	SILASTIC™ RTV-3497 Mould-Making Base	SILASTIC™ RTV-3498 Mould-Making Base
Color		Off-White	Off-White	Light Beige
Viscosity	mPa.s	18,600	24,800	27,200
Rel. density at 25°C (77°F)		1.16	1.21	1.23
Curing Agents		SILASTIC™ RTV-3081 Mould-Making Curing Agents	SILASTIC™ RTV-3081-R Mould-Making Curing Agents	SILASTIC™ RTV-3081-F Mould-Making Curing Agents
Color		Clear	Clear	Clear

Typical properties of base and curing agent mixture and of cured material can be found in Table 1.

Table 1

Typical properties of Base and Curing Agent mixture and of cured material after 2 days at 23°C (73°F)

SILASTIC RTV 3496 Base		SILASTIC RTV-3496 Base / SILASTIC RTV-3081 Curing Agent		SILASTIC RTV-3496 Base / SILASTIC RTV-3081-R Curing Agent		SILASTIC RTV-3496 Base / SILASTIC RTV-3081-F Curing Agent	
Base and Curing Agent mixture (100:5 by weight)							
Mixed viscosity	mPa.s	11,400		14,600		13,000	
Working time, minimum	min	120–180		120–180		60–90	
Curing time, maximum	hours	24		24		8	
Cured for 2 days at 23°C (73°F)							
Hardness (Shore A)		13		12		15	
Tensile strength	psi MPa	522 3.6		580 4.0		537 3.7	
Elongation at break	%	689		765		585	
Tear strength	ppi kN/mm	160 28		154 27		160 28	
Linear shrinkage	%	0.2–0.4		0.2–0.4		0.2–0.4	
SILASTIC RTV 3497 Base		SILASTIC RTV-3497 Base / SILASTIC RTV-3081 Curing Agent		SILASTIC RTV-3497 Base / SILASTIC RTV-3081-R Curing Agent		SILASTIC RTV-3497 Base / SILASTIC RTV-3081-F Curing Agent	
Base and Curing Agent mixture (100:5 by weight)							
Mixed viscosity	mPa.s	19,000		16,200		16,600	
Working time, minimum	min	120–180		120–180		60–90	
Curing time, maximum	hours	24		24		8	
Cured for 2 days at 23°C (73°F)							
Hardness (Shore A)		23		18		24	
Tensile strength	psi MPa	696 4.8		609 4.2		696 4.8	
Elongation at break	%	568		582		528	
Tear strength	ppi kN/mm	131 23		154 27		143 25	
Linear shrinkage	%	0.2–0.4		0.2–0.4		0.2–0.4	
SILASTIC RTV 3498 Base		SILASTIC RTV-3498 Base / SILASTIC RTV-3081 Curing Agent		SILASTIC RTV-3498 Base / SILASTIC RTV-3081-R Curing Agent		SILASTIC RTV-3498 Base / SILASTIC RTV-3081-F Curing Agent	
Base and Curing Agent mixture (100:5 by weight)							
Mixed viscosity	mPa.s	14,700		17,100		16,900	
Working time, minimum	min	120-180		120-180		60-90	
Curing time, maximum	hours	24		24		8	
Cured for 2 days at 23°C (73°F)							
Hardness (Shore A)		28		23		27	
Tensile strength	psi MPa	711 4.9		711 4.9		682 4.7	
Elongation at break	%	537		568		483	
Tear strength	ppi kN/mm	171 30		154 27		131 23	
Linear shrinkage	%	0.2–0.4		0.2–0.4		0.2–0.4	

UNRESTRICTED – May be shared with anyone

©™ Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow
© 2018 The Dow Chemical Company. All rights reserved.

Description

SILASTIC™ RTV-3496 Mould-Making Base, SILASTIC™ RTV-3497 Mould-Making Base and SILASTIC™ RTV-3498 Mould-Making Base are two-component materials consisting of a base, which when mixed with SILASTIC™ RTV-3081 Mould-Making 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 RTV-3496 Base, SILASTIC RTV-3497 Base, and SILASTIC RTV-3498 Base before use, as filler separation may occur upon prolonged storage.

Weigh 100 parts of SILASTIC RTV-3496, SILASTIC RTV-3497 Base, or SILASTIC RTV-3498 Base and 5 parts SILASTIC RTV-3081 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.

How To Use (Cont.)

Resistance To Casting Material

The chemical resistance of fully cured SILASTIC RTV-3496 Base, SILASTIC RTV-3497 Base, and SILASTIC RTV-3498 Base 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 RTV-3496 Base, SILASTIC RTV-3497 Base, and SILASTIC RTV-3498 Base 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 IN THIS DOCUMENT. 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 ON THE DOW WEBSITE AT WWW.CONSUMER.DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

Usable Life And Storage

Product should be stored at or below 32°C (89.6°F) in original, unopened 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 has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

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

<http://www.silastic.com>

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 customer's tests to ensure that our 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's sole warranty is that our products will meet the 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.

TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, DOW SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.

DOW DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

