



Technical Data Sheet

SILASTIC™ RTV-3133 Base **SILASTIC™ RTV-3081-F Mold-Making Curing Agent**

General purpose silicone moldmaking rubber

Features & Benefits

- Outstanding release properties
- High flowability and long working time
- Low hardness
- High elasticity, for easy removal of complex replica parts
- Economic and easy to use

Applications

- SILASTIC™ RTV-3133 Base 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.

Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Property	Unit	Result
Base and curing agent mixture (100:5 by weight)		
Mixed viscosity	mPa.s	20,000
Color		Beige
Working time of catalyzed mixture at 23°C (73.4°F)	minutes	30–45
Curing time	hours	6
Cured, tested after 7 days at 23°C (73.4°F)		
Hardness (Shore A)		16
Tensile strength	MPa	3.2
Elongation at break	%	534
Tear strength	kN/m	4.7
Relative density at 23°C (73.4°F)		1.15
Linear shrinkage	%	0/2–0/4

Description

SILASTIC™ RTV-3133 Mold-Making Rubber is a two-part material consisting of SILASTIC™ RTV-3133 Base, which when mixed with SILASTIC™ RTV-3081-F Mold-Making Curing Agent, 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.

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-3133 Base before use, as filler separation may occur upon prolonged storage.

Weigh 100 parts of SILASTIC™ RTV-3133 Base and 5 parts SILASTIC™ RTV-3081-F Curing Agent 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 allow the temperature to exceed 35°C (95°F). Mix suitably small quantities to ensure thorough mixing of the 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 base and curing agent, 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.

Pouring the Mixture and Curing

Pour the mixed SILASTIC™ RTV-3133 Base and SILASTIC™ RTV-3081-F Curing Agent as soon as possible onto the original, avoiding air entrapment. The catalyzed material will cure to a flexible rubber within 24 hours at room temperature. Then the mold can 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 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. Please contact a distributor for further advice.

**Additional
Information (Cont.)****Resistance to Casting Materials**

The chemical resistance of fully cured SILASTIC™ RTV-3133 Base 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™ RTV-3133 Base 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 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 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 30°C (86°F) in original, unopened containers.

Limitations

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

Not intended for human injection. Not intended for food use.

**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, dow.com or consult your local Dow representative.

**Disposal
Considerations**

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

**Product
Stewardship**

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

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