



AeroMarine Products, Inc.
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AeroMarine Products Food Grade Silicone Mold Making Rubber

AeroMarine Products Food Grade Silicone Mold Making Rubber is a two component, addition cure RTV platinum silicone rubber. The cured rubber has excellent mechanical properties and good shelf-life stability. AeroMarine Products Food Grade Silicone Rubber is designed for making chocolate, candy, ice, butter or other food molds. It has been tested to meet Title 21 (Food and Drug) Code of Federal Regulations Section 177.2600, Rubber articles intended for repeated use. Our Food Grade Silicone Rubber's mix ratio is 10:1 by weight. You will need a gram scale to accurately measure this product.

****Our Food Grade Silicone is NOT suitable for making food storage containers! Do NOT use for making baking or microwave pans.****

****SHAKE CATALYST VIGOROUSLY FOR 60 SECONDS BEFORE USING!****

Key Features

- High tear strength
- Low viscosity
- Picks up fine detail
- Excellent dimensional stability

Primary Applications

- Molds for food applications

Typical Properties

Uncured properties	"A" component	"B" component
Appearance	Beige	Purple
Mix Ratio	10:1 by weight	
Catalyzed properties		
Cure time	24 hours	
Pot life	~45 minutes	
Typical cured properties (3 days @ 25C)		
Durometer	40A	
Tensile Strength, psi	750	
Elongation, %	350	
Tear psi	125	
Specific Gravity	1.25	
Mixed Viscosity, cps	25,000	

Food Applications

It is important to wash the cured mold thoroughly with warm water and liquid dish soap before use.

Cure Inhibitors: The following materials will inhibit the curing agent: sulfur compounds, organo-metallic salt-containing compounds, chloride solvents, amines, tin/condensation cured RTVs, and sulphur-based or water based clays. Do not use latex gloves with this silicone. You can determine cure inhibition by brushing a small amount of the mixed silicone onto the surface and let it cure. If the silicone remains gummy/tacky after the cure time, then the surface is inhibiting the silicone's cure.

Cure Characteristics: The curing process begins as soon as the catalyst is mixed with the base. Under normal temperature (77F/25C) and humidity (50% RH) conditions, the material will cure as described in the data above.



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Any large change in temperature (+/-5C) or humidity (>60-70%) may alter the cure profile of the material. You can accelerate the cure with mild heat; 150F at 1 hour per inch of thickness.

Silicone RTV Rubber Mold Making 101

Making a mold can be very simple or it can be an art. It depends on the intricacy of your part.

If you have never made a silicone mold before, begin by making a mold of a simple part before making a mold of a complicated part

You will need an original part, clean mixing containers, mixing utensils, and a mold box into which to place your piece while making your mold. A mold box can be made out of almost anything, including a reusable food container, cardboard, wood and Legos. You may also need a digital scale, a glue gun and/or clay. Depending on the size of the piece, 1/2" of silicone mold-making rubber is the minimum thickness necessary for the walls of your mold. Making it too thick will reduce the flexibility of the mold, while too thin will reduce the resistance to tearing.

Silicone RTV mold making rubber may soak into a porous surface like wood or plaster. To prevent sticking, first seal the part with a sealant appropriate to the material.

Types of molds to make with Food Grade Silicone:

BLOCK mold, one piece. The part usually has no negative draft or undercuts. Building this mold is simple. Mount your part in the center of a container or mold box. You will need at least ½ inch of silicone on all sides of the part. Apply mold release, if needed. Next, pour your mixed silicone in the shallowest area of the container. Pour only into this spot and let the silicone flow naturally around the part. This reduces air bubbles in the silicone. Once the silicone has cured, you can de-mold your part.

BLOCK mold, multiple piece. This part has undercuts and/or is complex. The mold must be taken apart to remove casing. You can make this type of mold using non-sulfur, non-drying modeling clay and pouring the silicone in 2 separate pours. Use a mold release between the pours to keep the silicone from sticking to itself. To keep the cured mold together, you can use rubber bands or painter's tape.

For more detailed instructions and videos on mold making, please visit our website,

www.aeromarineproducts.com

Mold Release

Generally, silicone RTV mold making rubber does not stick to anything, and nothing will stick to it. *The exception is that it will stick to itself, other silicones, silica, and glass.* Mold release will prolong the life of your mold by reducing the wear on the mold by making it easier to remove your cast piece.

Measuring and Mixing

Shake the catalyst very vigorously for 60 seconds before weighing it. Weigh parts A and B accurately. Once you have correctly measured both parts, mix parts A and B together with a plastic or wooden stirring utensil. Take care to scrape the sides and bottom of the mixing container. Keep your stirring utensil on the bottom of the container to reduce the amount of air being mixed into the silicone. Mix for several minutes, scraping the sides and bottom frequently, until the silicone is one uniform color with no streaks.

Pouring Silicone

When pouring your silicone, do NOT pour it directly onto the part. Instead, pour the silicone into the shallowest part of the mold and let it find its own level. This method prevents air bubbles forming on the surface of your part.



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Storing Your Cured Silicone Mold (Storage longer than 1 week)

First, apply mold release to your cured mold. Second, pour your casting material into the prepared mold. Or, you can insert a previously cast cured piece into the prepared mold. Third, put your mold (if a smaller mold) with the piece in it into a doubled "Ziploc" type bag with all the air pressed out of the bags. Fourth, seal the bags tightly closed using either a plastic bag sealer or over-tape them with duct tape. For larger molds, use very heavy duty doubled garbage bags, remove all the air and seal tightly either with a plastic bag sealer or over-tape with duct tape. Finally, put your sealed, bagged mold into a plastic storage container with a lid, close the lid and store on a flat shelf/surface (NOT the floor or window) at continuous 70F out of direct sunlight.

Cleaning Your Silicone Mold

Wash your cured silicone mold with warm/hot water and mild liquid dish soap. Pat dry thoroughly and then let the mold air-dry fully. Never use any type of abrasive soap, cleaner or pad to clean your silicone mold!

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