

Choosing the right Mold Material

How to use TAP Premium Liquid Latex Rubber



Brush It On!

- Glove Molds
- Blanket Molds

- Bubble-Free Surface
- Fine Detail Reproduction
- Excellent Tear Resistance
- Economical • Easy to Use

TAP's Mold Making Rubbers...

- **Premium Liquid Latex Rubber** (see Product Bulletin 7a)
- **Silicone RTV** (see Product Bulletin 7b)
- **Urethane RTV System** (see Product Bulletin 7c)

Our Mold-Making Rubbers let you reproduce most any surface or shape, regardless of size or amount of detail. Your model remains intact and your finished mold is durable, reusable, and economical. If mold-making is a new experience, it is best to familiarize yourself with the product by first making small molds and castings.

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Applications for Different Casting Media

There are numerous moulding applications for TAP Molding Materials, here we will only mention a few of them, classed according to the type of material molded.

Examples of use	Material
Furnishing Figurines Frames – mirrors – paintings Buttons Paleontology Reproduction of old objects	POLYESTER
Furnishings Prototypes Interior car trim Cornices – roses	POLYURETHANE
Master prototype models Production of tooling Reproduction of statuettes	EPOXIES
Prefabrication Decoration	CONCRETE
Figurines Master moulds for tiles	PLASTER
Decorative candles Jewelry (lost wax process)	WAX- PARAFFIN
Fancy jewelry Prototypes Small production runs decorative items	LOW MELT ALLOYS

WARNING

KEEP OUT OF REACH OF CHILDREN. Avoid breathing vapors. Exposure to mist or spray may cause coughing, sneezing, or other symptoms of upper respiratory tract irritation. Skin: Wash with large amount of soap and water. Eye: Immediately flush with water for at least 15 minutes. Consult a physician if irritation develops or persists. Ingestion: May cause irritation to mucous membranes of mouth, throat, esophagus, and stomach.

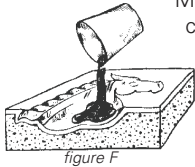
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of container and separate the backup mold from the Blanket Mold. Peel the Blanket Mold from the model. Insert Blanket Mold into backup mold and pour with desired casting medium... (figure-F).



TAP Tips for Using Liquid Latex Rubber

1. Make your brush easy to clean by dipping in soapy water and squeezing out excess before starting project.
2. Thin FIRST coat slightly with water for exceptional detail.
3. Break bubbles on surface by blowing on them through a straw while latex is wet.
4. Do not apply successive coats until previous coat is *completely* dry and all traces of white have disappeared. Thin coats will dry much quicker.
5. Do not wait more than 24 hours between fully dried coats. Latex does not stick to itself once it cures.
6. Lubricate the outside of a glove mold with hand cream to make it easy to peel off model.
7. Store dry molds individually in a clean plastic bag.
8. Speed drying time with warm room temperature and moving air or a hair dryer.
9. One quart will yield a mold about 12" x 16" x .16".

TAP Tips for Using Casting Mediums

TAP Premium Liquid Latex Rubber is compatible with any of the casting materials stocked in our stores. It is also excellent for casting plaster, cement, and molten wax, none of which require a release agent. When casting plaster, coat the mold with 1% detergent solution, such as, Ivory Liquid Detergent (do not use soap), to reduce surface air bubbles in the plaster. After first few castings, release becomes easier.

Even though polyester resin does not require a release agent, the use of one is recommended as it increases the life of the mold and eases the cast part out of the mold. Epoxy and Quik-Cast both require a release agent (TAP's Pol-Ease 2300 is ideal). Fillers can be used with polyester, epoxy, and Quik-Cast to produce incredible effects and dramatically reduce cost.

Remove the cast part from the mold as soon as possible to prevent mold degradation from heat and chemical migration.

TAP products are manufactured to quality specifications but should be tested to determine their suitability for your application. Because we have no control over working conditions or methods, our liability does not exceed the value of replacement of this product. TAP Resin products are guaranteed for six months from date of purchase.

Selecting Mold Material

TAP Latex Mold Builder... is a heavy viscous, single component, natural liquid rubber designed for making peel-off glove type molds. Latex Mold Builder will work with many kinds of casting materials, such as casting plaster, epoxy and polyester resins, candle wax, and polyurethane. Latex's useful life span will be considerably shorter than Urethane RTV or Silicone RTV; however it does provide an economical and simple way to create glove-type molds.

TAP Silicone RTV (see *Product Bulletin 7b*) has the advantage of seldom requiring a release agent. Parts cast in a silicone mold are usually ready for finishing without having to wash off a release.

Silicone RTV produces very intricate detail. Its flexibility allows deep undercuts in a one-piece mold that might otherwise require a multiple-piece mold from a more rigid mold material. It is ideal for one-piece or multiple-piece molds as well as glove and blanket molds.

COMPARISON OF MOLD MAKING MATERIALS			
Features	Latex	Urethane	Silicone
<i>Description</i>	One part, brush on, liquid rubber, no mixing or measuring required	Two part, one-to-one mix	Two part, ten-to-one mix
<i>Cost</i>	Very inexpensive material and very little material needed per mold	Medium cost and requires more material.	Higher cost material, but can use less than urethane, and does not require release
<i>De-Mold Time</i>	Requires 20 layers w/ 30-60 minutes between layers= at least 2 days	24 hour cure	6-8 hour (blue catalyst) or 16 hour cure (green catalyst)
<i>Ease of use</i>	Easy, no mixing or measuring, brush on, requires shell mold.	Easy 1 to 1 ratio, de-airs on its own, poured	9 to 1 or 10 to 1 ratio, hard to mix due to high viscosity, poured or brushed. Must be de-aired
<i>Mold types</i>	Glove mold or 2-part glove mold	Block or 2-part block mold	All type of molds
<i>Advantages</i>	Easy, low cost, usually requires no release Soap and water cleanup	Easy mix ratio (1-to-1), very durable, easy bubble release	Versatility of use no release req., fast or regular cure rates, thicker or thinner available
<i>Disadvantages</i>	Limited durability, only one mold type, takes a long time to make a mold, usually requires 'mother' mold	Requires release agent, 24 hour cure, limited mold types	Harder to mix, more difficult bubble removal, approx. 30% more expensive than urethane

TAP Urethane RTV System (see *Product Bulletin 7c*) consists of Side-A and Side-B liquids. After mixing, it cures at room temperature to a flexible, high strength, Shore-A30 mold rubber (*Example: household silicone sealant is approximately Shore 30*). This system features easy releasing for casting gypsum plasters and waxes without release agents. It is also excellent for casting cement, epoxy, polyester, and urethane with proper release agents. It is a safe

product to use when directions are carefully followed.

Side-A is a clear liquid with medium viscosity of 5000 cps and specific gravity of 1.02 g/cc. Side-B is a low viscosity blue/gray-amber translucent with a specific gravity of 1.00 g/cc. Part-B requires stirring before use and may darken with age, but this does not affect mold properties.

TAP Urethane RTV is an economical material for making brush-on, pour-on, and multi-part molds. With a long-working time and excellent bubble release for detail reproduction, it is a good all-around choice for mold makers.

Glove Molds with Liquid Latex Rubber

1. Prepare Model... preparation depends on porosity of the model and amount of detail desired. Latex Mold Builder will enter minute crevices and penetrate porous surfaces. If mold release is not used, the mold will be difficult or impossible to remove from the model. TAP offers a number of different releases.

Most projects require releases for both the pattern and the mold. Test for compatibility by using small samples of the materials you will be using for your project.

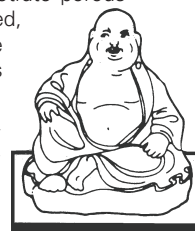


figure A

For porous surfaces a good release is

TAP Wax Mold Release. Apply it with a soft, short-bristled brush and then remove excess wax with a stiff brush. Keep brush dry by wiping it with a cloth. Polish smooth areas with your hands or a soft rag. If applied properly, TAP Wax Mold Release will not leave residue or hide detail. Latex can be applied approximately five minutes after mold release dries. Non porous surfaces usually do not need a release. However, it is always best to test a small inconspicuous area first. TAP Wax Mold Release can be used if needed.

2. Determine Base of Model (bottom of mold)... attach model securely to a solid base (acrylic works well). Use a caulking material or **Plasticene Modeling Clay** to fill cracks and openings around the base and bottom of model. This prevents the mold material from seeping under the model. The bottom (base) of the model becomes the fill-opening of the mold. The back side of a plaque is its fill opening.

3. Apply...brush a thin coat of Liquid Latex Rubber on the model, making sure that any air bubbles are popped... (*figure-B*). Avoid build up in crevices that will require extra drying time. Brush Liquid Latex Rubber in a continuous film onto the base surface, forming a 2" flange around the base of the model. This flange will support the mold during casting.

Allow coating to dry completely until **ALL** traces of white

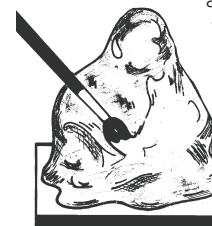


figure B

are gone and the coating appears to be translucent. Repeat for successive layers, allowing each to dry. If elongation is not necessary, gauze may be added in strips for reinforcement and as a reduction to the number of coats required. Do not allow more than 24 hours between coats.

The average model will require 8 to 20 coats of liquid latex. Clean the brush with soap and water between coats. Before removing the mold, allow it to cure 24 hours after applying the last coat.

5. Make A Casting... after removing the mold from the model (see TAP Tips), apply a mold release to the inside of the mold to prevent the casting material from sticking to the mold. Suspend the mold by its flange, using a properly sized hole cut in a cardboard box as a support. Use masking tape to hold the flange to the cardboard. Carefully pour the casting medium into the mold, being careful not to trap bubbles. Experiment with a small mold before attempting any major project.

Blanket Molds

A plaque-type model with a high-relief design usually requires a Blanket Mold. This method uses less mold material than would a plaque mold. (*Described in Product Bulletin 7C*)

1. Prepare Model... attach model to base and prepare surface as explained in Step 2-Plaque Molds... (*figure-C*).

2. Mix • Apply... follow steps 3 and 4 for Glove Molds (*figure-D*). Allow to cure.

3. Make A Back-Up Mold... because a latex of this type is so flexible, it will not hold its mold shape for casting when laid on a surface. Therefore, some kind of rigid backup mold is required. Construct a container around the sides of the base to hold the backup mold... (*figure-E*). Coat the exposed surface of the cured blanket mold with petroleum jelly

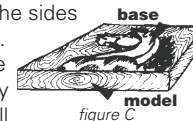


figure C



figure D

(Vaseline) or use PolEase 2300. This will prevent the backup mold from adhering to the blanket mold. The base container must be on a level surface before casting. Use plaster of Paris, concrete, fiberglass, or similar medium to make the backup mold. If its weight will be restrictive, then use TAP's X-30 Polyurethane Foam. X-30 is not only light weight (two pounds per cubic foot) but it also provides the rigidity required of a backup mold. Allow the backup mold to cure. Remove sides



figure E