



**PYROS GLASS STUDIO**

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## **PYROS TECH NOTE #2**

### **Making One-Piece Flexible Molds with Pyros Professional Mold Latex**

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Latex molds are inexpensive, easy to make and preserve excellent detail. With care they can be used many times. A latex mold is made by painting the model with between 3 and 10 coats of latex, allowing each to dry before painting the next one. The mold is then peeled off of the model. When cured, latex molds are very strong and flexible. Such "glove" type molds can be turned inside-out to fill or remove pieces.

#### **About Mold Latex**

Latex rubber is a natural product made from the sap of tropical trees. It is supplied as an emulsion that usually smells of ammonia. The ammonia is added at the plantation as a preservative, and also helps keep the latex from absorbing water from the air. Natural latex is white in color and turns light tan as it dries. After drying, the rubber continues to harden (vulcanize) for several days, during which it turns a darker amber color. The mold is then ready to use.

Mold latex should be stored tightly closed in a cool, dark place out of direct sunlight. The shelf life of uncured mold latex is about a year, although it can last much longer. If exposed to light, latex may turn pink; this has no effect on the performance of the material. Latex is good as long as it flows smoothly. If it has a lumpy, "cottage cheese" consistency it should be discarded.

#### **Making a flexible mold with Mold Latex**

##### **You will need:**

- A model
- Pyros Professional Mold Latex
- An inexpensive (preferably disposable) paint brush
- A container of cold water
- A flat non-porous work surface, such as a pie plate or piece of window glass

##### **Safety first!**

Mold Latex contains ammonia, which is irritating to breathe in high concentrations. Always work in a well-ventilated area. CAUTION: Some individuals are allergic to natural latex products.

#### **1. Prepare your model**

Your model can be made of modeling clay, polymer clay, wax or any non-porous material. Porous surfaces such as wood, shells, etc. should be sealed with a coat of spray-on acrylic lacquer. Holes or deep indentations that would trap the latex can be filled with polymer clay or putty.

Your model must have at least one flat side that can rest against the work surface. Remember, you'll have to be able to remove the model in one piece by stretching the mold around it. If there are very deep indentations or holes in your model, fill these with within 1/8" of the surface. If you are trying to make a mold of something very thin, such as a leaf, press it onto a 1/8" sheet of clay or soft wax, and then trim around it with a sharp hobby knife.

## 2. Brush on the first coat of latex

Stick the flat side of your model to the flat work surface with a little bit of clay or soft wax. Paint a thin "detail" coat of latex over the entire surface of your model. Be sure to paint carefully into any details or depressions. Also paint a 1" flange on the work surface around the base of your model. This will give you something to hold onto later when you are removing and filling the mold. When you are done, wipe your brush and place it in a cup of cold water for later use.

## 3. Brush on additional coats

Let each coat dry until it turns a uniform tan color and any white spots are gone. This usually takes several hours. You can speed this up with a fan or a hair dryer turned to the coolest setting. Apply a fresh coat of latex as soon as the previous one is completely dry. Paint into any depressions and remember to paint the flange, too. After each coat, wipe off your brush and put it back in the cold water.

Apply 5 or more coats of latex. Larger models may take more than 10 coats. Don't try to speed things up by gobbing on thick coats, as these will take a long time to dry. Wait no more than 24 hours between coats. If you do, the previous coat will have started to vulcanize, and the next coat will not stick properly.

## 4. Demold and vulcanize

Dust the mold with a little talcum powder, which keeps it from sticking to itself as you demold. Starting at one edge of the flange, peel the mold and model from the work surface. Gently peel the mold off of the model and set it in a warm place. At this point, the rubber is still a bit tender, but it will become harder and darker as it vulcanizes. At room temperature, a mold will self-vulcanize in about 3 days. You can speed this up by putting the mold in an oven for 4 hours at 120 degrees F. The mold is then ready for use.

## 5. Clean up and store your mold

Clean your brush by rinsing in cold water only. Trim the flange of your mold with scissors. Latex molds should be dried after each use and kept in a cool place out of direct sunlight.

