

Casting basics demo

Here's list of materials I used in the demo and my reviews of the different products in case you wanted to get started in resin casting.

Materials:

80475 Micro-Mark mold release
82057 Micro-Mark CR-600 Casting resin
82057 Micro-Mart CR-300 Quick cure casting resin
82083 Micro-Mark One-to-One Rapid Mold Rubber
80476 Klean Klay
Stirring sticks
Medicine measuring cups
Materials to make the frame for the mold

82698 Complete Starter Set is a good choice for a beginner

Alumilite casting materials:

10500 Super Casting Kit
10506 Min-casting kit (another good choice for a beginner)
Alumilite Regular

My thoughts on the products:

Molding rubbers—I've tried a couple of different types, but find the one to one type of rubbers to be the easiest. One to one means you have to add equal parts of each part, while other products usual want a 10 to 100 mix. I've used three different manufactory's rubbers. Alumilite, Micro-Mark, and Smooth-on were all good, but I tend to use the Micro-Mark product the most. The rubber by Smooth-on was excellent for picking up small details, but resin tended to stick to the rubber if the proper type of mold release wasn't used. I lost two good molds when a copy stuck and had to be cut out, destroying the mold.

The type of mold rubbers that require a one to ten mixing ratio is good, but more difficult to use. I tend to make small molds for one or two parts, and the equal parts type of rubbers are easiest for these types of projects. If you are going to do big parts, this is probably what you'd want to use.

The rubber tends to breakdown in thin areas and where it has to be stretched. Saying that, I'm still using molds that I made two or three years ago. Making thicker molds and being extremely careful removing the castings will help the mold hold up. I've also used rubber molds to cast metal figures, and the molds hold up well to the 300-400 degree temperatures.

Recommendation—Micro-Mark One-to-One mold rubber.

Casting resins: Both the Micro-Mark Cr-600 and the Alumilite Regular make excellent castings. You just have to be aware of the differences in how they work. Alumilite Regular has a 90 second work time, and five or six minute de-mold time. What that means is you have 90 seconds to stir and get it into the mold before it starts to set up. When I first started, I'd mix too long (not mixing it long enough is a mess) and actually had it harden as I was stirring. Watch the mixing cup- the two parts first come together in a milky color, but as it fully mixes it becomes a coffee colored, clear liquid without the milky-ness—pour it then. If you by chance didn't mix it enough, just pull out the mess, and pour new resin it- it will pullout the mess when it sets-up.

The CR-600 has a longer work time, 7 minutes, and de-mold in 30 minutes. I first used this, and tried to pull it out too early only to have it destroy the casting. Patience is the key.

So what are the advantages of each? Alumilite makes a light cream-colored casting. With the faster de-mold time, you can get a lot of castings made quickly. The draw back is that it is a bit more likely to have air bubbles caught on the surface of the mold, meaning more clean-up afterward. CR-600 sets-up slower, so bubbles are less likely and it creates a white casting. That makes it better for more complex molds and castings.

Recommendation: I like them both, but tend to use the Alumilite the most because I can rapidly finish the project.

What about the other items you'll need? I've collected most of what I need at low or no cost.

- ❑ **Clear plastic cups** make great mixing containers.
- ❑ **Medicine-measuring cups** (small, marked in ounces, ccs, milliliters, drams, and tablespoons) that are made of a soft plastic to measure out the resin. The softness of the plastic is important because after I use it, I set it aside and a few minutes later the resin has set-up. A little flex of the cup and you can pull out the resin and reuse the cup.
- ❑ **Mixing sticks** (go to your favorite fast food restaurant, and pick up a couple next time you have a cup of coffee).
- ❑ **Clay** is important for making small molds. Roll out a small piece of clay and use it to seal the mold to the surface so not rubber leaks out.
- ❑ **Legos:** I've stolen from my kids a small pile of Legos that I use to make the mold box. You can also use scrap plastic to glue together a mold, but I find the Legos easier to reuse.

Designing the mold is something that you'll learn by practice. Both Micro-Mark and Alumilite put sheets on designing molds in with their products. Their web pages also having additional instructions, video demos, and examples, so I won't go into it here.



Wargaming supplies I've cast. I carved one basic house, cast a couple of copies, modified them into five different versions, and then molded them. They fit 1/285th scale. The photo on the right shows a couple of platoons of M60A3s and M1A1 (background) cleaned up and ready for priming.