

Beginner's Guide to Resin Casting

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Ship models need more than one of just about everything. Resin casting is an ideal method of making an object, and then producing the object in whatever number that you need, and they will all be identical. It is easier than it looks.

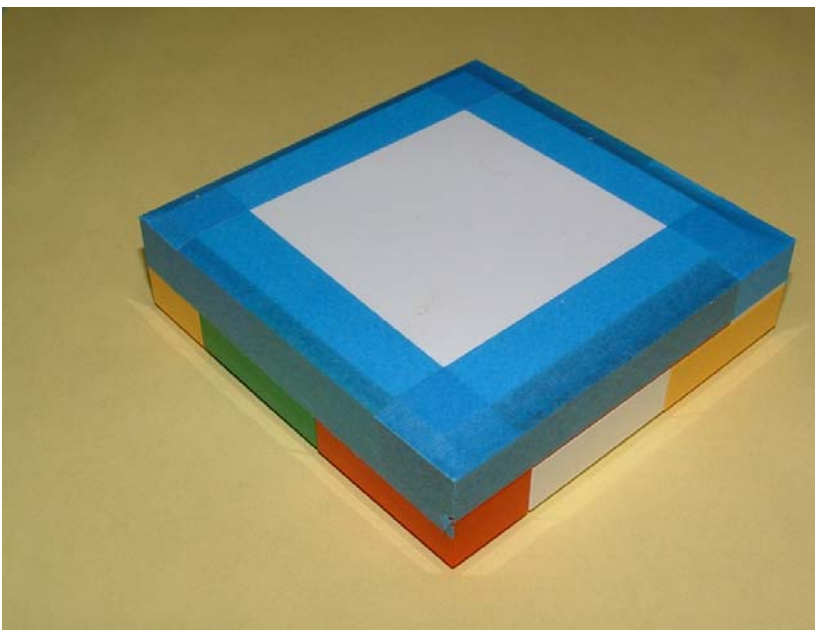
The problem lies in that all the information readily available assumes that you already know the basics. I have just been through this process; therefore it is still fresh in my mind as to what I really needed to know to get started.

Micro-Mark has a **Complete Starter Set #82698** that includes everything you need. There is only one item which could improve the set. Instructions! There is an instruction sheet "How to make a two part mould" which is not the place to start resin casting. Besides, there is a wealth of information on making advanced moulds and castings on the internet.

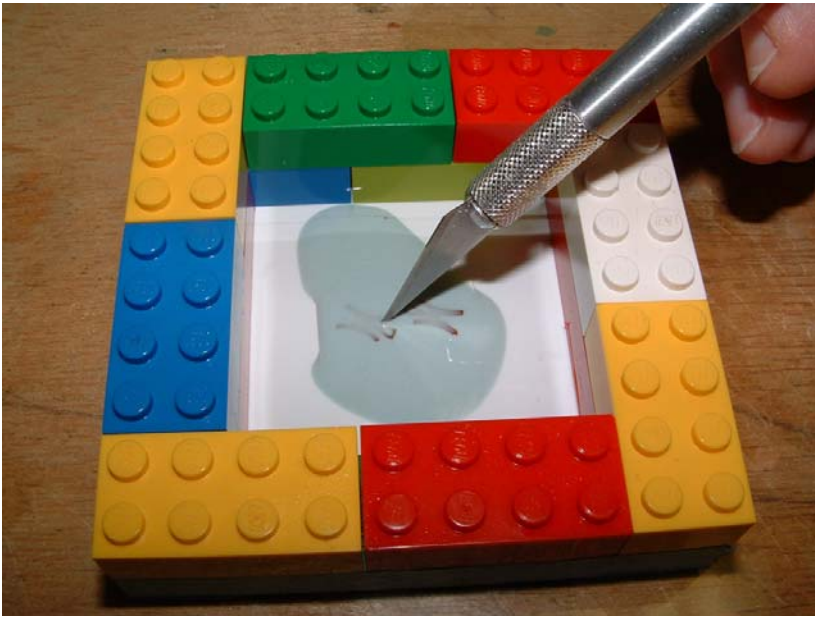
But there is nothing about basic methods, and that is what I will try to show here. As an example, I will illustrate how to produce deadeyes for my 1/50 Gokstad Viking Longship:



First mount the deadeye originals onto a 0.020" styrene pad that measures 1/2" x 1". This gives excess material that you can sand away to give replicas that are the same thickness as the original. Then attach this to a 2-3/4" square 0.040 styrene pad.



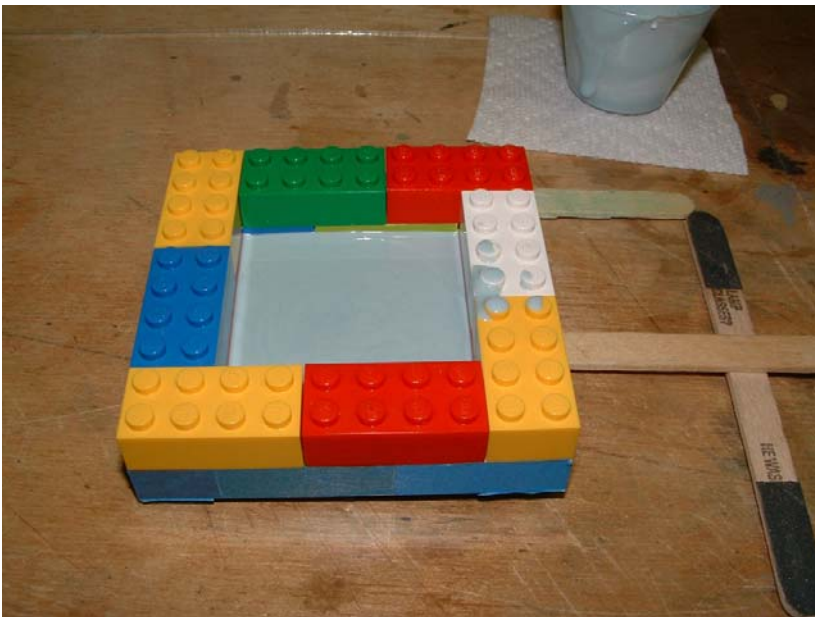
Lego blocks are perfect for building a mould box. Assemble a square, 2-1/2 blocks per side by 2 blocks high. Then tape the original to the bottom of the Lego blocks.



Spray the inside of the mould box with the 'Rubber to Resin Mould Release'. After 5 minutes, thoroughly stir the silicon rubber components to ensure that they did not separate during storage and shipping.

Mix a total of 20cc of parts A and B at a 1:1 ratio (10cc each.) Stir thoroughly, but try to keep from creating air bubbles in the mixture. When the color turns a uniform blue, you are ready to pour your mould.

Pour enough of the silicon to just cover the deadeyes. Using a #11 blade, prick all the air bubbles that appear, concentrating on the minute crevasses around the edges of the originals, and any openings within it. You have to lift the bubbles out of the small areas because the bubbles are bigger than the crevices.



Level the box, and complete the mould by pouring the silicon around the outside edges of the 1/2" x 1" pad. Don't pour directly over the original, and let the silicon run over the original to avoid adding air bubbles there. Stop adding material just below the top of the first block.

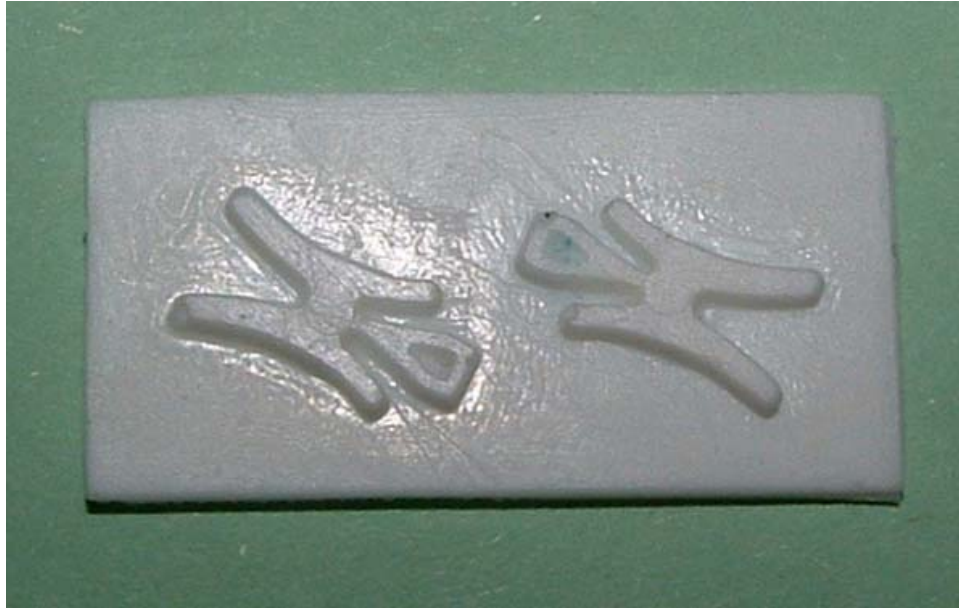
After a minimum of 4 hours, remove the masking tape and carefully peel away the original. The Lego block box is then disassembled. Peel off any excess material from the Lego blocks. Use a sanding pad or just fingers to remove any excess silicon from the side of your mould. Hint: I take a minute and wipe the blocks with a rag to remove any remaining silicon and mould release. This makes it possible for the masking tape to stick to the Lego the next time I make a mould box.



To make the casting, the mould needs to be level because the solution you will use is thin. My workbench is not level, so I make my resin pours with the mould resting on a plate of glass leveled with tongue depressors.

Shake your resin components thoroughly; let the bottles sit about 5 minutes before pouring a total of 5cc of parts A and B at a 1:1 ratio (2.5cc each.) Stir the contents until it clears and pour the mixture into the mould completely filling the 1/2" x 1" cavity. Once again, using a #11 blade, prick all the air bubbles that appear, concentrating on the minute crevasses around the edges of the originals, and any openings within it. You have to lift the bubbles out of the small areas because the bubbles are bigger than the crevices.

The mixture will turn white as the resin 'kicks' (started it's chemical change.) After 1 hour, pop the casting from the mould. Hint: I watch the resin left in the mixing cup. By tapping on the bottom of the mixing cup, I knock the plug from the cup and if it is not rock hard, I wait for the plug to harden before removing the casting from the mould. (The casting will need to be cut out; a topic for another paper.)



Is it as easy as I make it sound? YES! Once you have made a casting, you will find plenty of places to use your new skills, and learn to mix just enough to complete the pours. There isn't much material in these deadeyes, therefore I wait till I am pouring larger pieces, and use the excess material to cast a couple of deadeyes at the same time.

By Wayne Wicker for [Model Shipwrights' Database](#) and [Model Ship World](#)