

How To Mold Antique Car Steering Wheel

Products used in this How To:

- * Alumilite Plat 55 Silicone Rubber
- * Alumilite Synthetic Modeling Clay
- * Alumilite Corrugated Plastuc Strips
- * Hot Melt Glue
- * Plastic or wood base
- * Putty Knife or Alumilite Spatula Tool Set
- * Excel Knife
- * Screws or Nuts & Bolts
- * Rubber to Rubber Mold Release
- * Stir Stick
- * Mixing container
- * Vacuum Chamber (if available)



As with any normal two piece mold, begin by starting with a bed of Alumilite's Synthetic Modeling Clay and pressing your part (the steering wheel) into the bed of clay. Then build the clay up to your determined parting line. It is important to have a very clean and straight parting line to reduce flash and post clean up of your cast resin piece. So spend the time necessary to make sure the line where the clay touches the steering wheel is straight and clean. Then build your mold box around the part and inside the part to take up the extra space between the rungs of wheel.



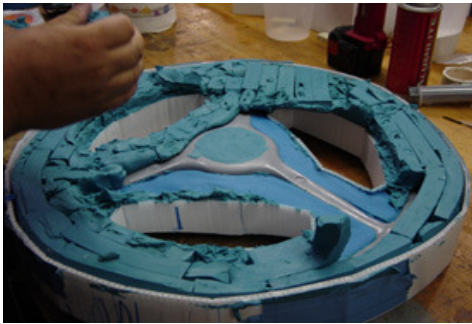
Once you have the part clayed up and the mold box sealed, mix your silicone rubber and begin to pour. We are using Alumilite's Plat 55 mold making rubber for this part because it has excellent dimensional stability, a firm hardness, good tear strength, and a great mold life for casting lots of parts. After mixing, it is highly recommended to degas the Plat 55 to remove the air you introduced when mixing. If you do not have vacuum, start by drizzling the rubber over the steering wheel. This will wet out the surface of the part and allow the air bubbles to more freely rise up and away from the surface of the part. If your part has a lot of undercuts, you may not wish to do this step. But due to the size of the part and the openness of the mold box, this process helps to make sure the air releases from the surface of your part and allows the air to bubbles to float to the top of the mold away from the part.



Once the critical detailed surface is covered, begin pouring the bulk of the rubber in the center of the mold box allowing the silicone to flow naturally over the part until it completely covers the wheel.



Make sure the liquid rubber covers the part by at least 1/4"-3/8" and make sure your mold box and inside cavities are not leaking. Allow the rubber to cure overnight.



Once the Plat 55 has cured, flip the mold over, remove the mold base, and begin digging all of the clay off of wheel. DO NOT remove the wheel from the poured silicone rubber mold. The seal between the mold and wheel is critical in producing a smooth/clean seam line. A putty knife and/or Alumilite Spatula tools are helpful in removing clay around and near steering wheel.



Continue cleaning all of the clay off of the part until absolutely no clay can be seen. Once all of the clay is cleaned off, cut locators in the surrounding flange areas of the silicone rubber that will align the two halves of the mold. Mold release the entire mold and part with 3-4 coats of Rubber to Rubber mold Release to ensure the two halves of the rubber do not stick to one another. It is not necessary to mold release the part but with this piece it would be next to impossible to cover every bit of the cured silicone without getting some on the part. Then mix and pour the second half of your two piece mold.



Once the second half of the mold rubber has cured, remove mold from the mold base, box, and inner box cavities.



Find the seam line with your fingers and begin separating the two halves of the mold.



Slowly work the mold apart following the seam line between the two halves.



The mold will separate cleanly and you will now have a beautiful two piece mold with locators that will line up the two halves beautifully.



Now you are ready to prepare the mold for casting.



Using a Key Knife or Excel blade, cut a wedge in the mold to produce a pour hole for the resin. For cosmetic reasons cut the half of the mold that will be the back of the steering wheel.



This piece will be inserted back into the mold immediately after the resin has been poured into the mold before it cures.



Using plywood, create a splint that will maintain the dimensional integrity of the mold and will make for easier handling of the mold while pouring. Two pieces of wood with holes drilled so bolts can hold it together work great.



The bolt holes will line up with the holes in the mold left to take up space and will not interfere or touch the silicone at all.

How To Cast Antique Car Steering Wheel

Products used in this How To:

- * Alumilite White Casting Resin
- * Stir Stick
- * Mixing pail
- * Excel Knife to remove flash



You are now ready to begin pouring. Mix equal amounts of Alumilite White A side and B side in a bucket.





Mix the material thoroughly until absolutely no swirls or streaks are seen.



Tilt the mold to allow the resin to flow down the side of the mold to decrease the chance of creating air bubbles when pouring. Pour slowly to allow the resin to flow naturally into the mold.



While pouring, tilt the mold to help the resin flow into the different areas in the mold and to eliminate undercut areas which will allow any air bubbles to flow back up to the pour hole and escape.



An extra set of hands may be necessary depending on the size of the mold. Continue to rotate the mold back and forth until the mold is full of resin.



Once the mold is full, place the pour hole cut out back into its position which will squish out the excess resin and fill the detail back into that section of the steering wheel.



Press the cut out section firmly back into place until the U channel made by the Key Knife snaps into place.



Once the resin has cured, remove the bolts and boards supporting the mold and begin to separate the two halves. Continue to work around the outside edge to separate the two halves.



The mold will separate and you will find your cast steering wheel with minimal flash and a small seam line around the pour hole section on the back of the part that can easily be cleaned up.



Remove the steering wheel from the mold and with your fingers or a dull knife remove any excess flash.



You now have an exact replacement for your antique car steering wheel. The mold is ready to be put back together and poured again.