Making a two piece mould

Needed matherials from the shop

- Silicone Condensation 20 A component
- Silicone Condensation 20 B component
- Wax extruders
- Plasticine

Preparation

Before the mould is casted make sure that the model is clean. Brush of any dirt or dust and polish out unwanted bumps. Because your mould will copy everything including the smallest details.

Glossy parts on the model will also be glossy on the mould. Matte parts will also be matte on the mould. Treat the surface of the model with a release agent if necessary.

Let's start

1. Determine form witch side to cast the form. Place the model on a horizontal surface. Use plasticine to bring it into position. Place the wax extruders in such a way that there will be no chambers left that are closed so all the air can escape.

2. Apply plasticine arround the model. Rub the plasticine towards the model and define where the division seam will be.
3. Make light indentations in the plasticine, using for example a marble. This will be the"key" this will keep both parts exactly in place later on.

Fig. 1: The master model (bronze) is clean. In this case a release agent is not necessary.

Fig. 2: The master model is set in position and wax extruders are attached

Fig. 3: The master model is embeded and the division seam is set.

Fig. 4: Arround the model a series of indentations are made to form the key.

4. In order to hold the silicone in place while casting place a formwork around the plasticine. Please note that silicone is very liquid, any crack or hole is enough to run through. So always double check before casting and apply some extra plasticine were needed.
5. Blend the Silicone condensation 20 A-component with 2% B-component in a clean bowl or measuring cup.

***Tip**: Because the B-component is added in a small dosage a seringe comes in handy. In this case 1 ml can be read as 1 mg.*

6. Blend the two components with a stiring stick untill both componets are fully mixed. It is inportant to cover every corner and not leave any unmixed parts.

***Tip:** To be absolutely sure both components are mixed well a colouring a colouring agent can be added to the B-component.*

7. The silicone is now ready to be casted. Take the pot life of the silicone into account during processing. After about one hour the silicone will become too thick to be casted.
   Casting the silicone in a thin trickle will give air that is trapped inside the silicone time to escape. Using a vacuum pump is not imperative but it will improve the quality of the rubber.
   .
8. Wait about 8 hours before starting on the second part.
   Gently tough the silicone and check if it has cured completely.

9. Turn around the silicone mould with care and remove the plasticine. Leave the mother model in place and rub a release agent (grease) onto the silicone surface. Be sure not to miss any spot for there is a chance the second layer of silicone will bind with the first.

Fig. 5: The embedded model with wax extruders and formwork. Ready for silicone casting.

Fig. 6: Casting the first part of the mould.

Fig. 7: The model is embedded in silicone upto the devision seam. And treated with vaseline.

10. After treating the first part of the mould with a release agent. The formwork can be placed. Put plasticine on the outside of the formwork if necessary. The second part can now be casted.
11. Let the second part cure for about 8 hours before demoulding the mother model. First feel gently if the silicone has cured well enough. Use a sharp knive to cut the wax extruders free so they can be demoulded. The cuts will not be seen in the final model while the silicone colses tightly.

12. The mould is now ready for use. You can cast as many copies you like in various materials. Note: aggressive materials may shorten the life span of the mould.

Fig. 13: The mother model and a copy out of mouding wax (Hard)

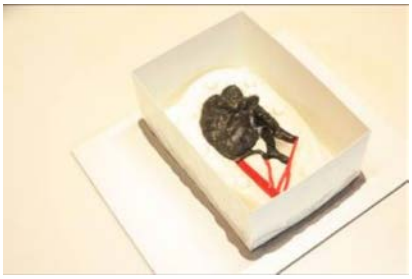

Fig. 8: The formwork is in place and any leakage is prevented by the plasticine on the out side.

Fig. 9: The second part of the mould is casted.

Fig. 10: Cutting the wax extruders free.

Fig. 11: The model and wax extruders can be demoulded with ease.

Fig. 12: After demoulding the mould will flip back any parts were cuts were made. These cuts will not shop up on the copy