3D Design – 3D Printing – Mould making – Resin and rubber casting

THE MAKING OF CUSTOMISED SOAP MOULDS

The workflow below briefly describes the processes that I use to manufacture rubber moulds for the casting of soaps (or resin, candles, chocolates, etc).

1. **Manufacture of the master** (or template): To make or "pull" the rubber mould I require a physical representation of the soap that you intend on casting with the mould/(s). In a few cases the client supplies this physical model whether it is sculpted out of clay, carved out of wood or 3D printed.
   Normally I will manufacture this master. I use 3D design software to design the master according to the client's requirements. This normally entails the modelling of the size and shape of the soap and then the design of the client's logo on this digital model according to the client's preference. This digital design process ensures that the client gets exactly what he or she wants since it is visualised and changes are made digitally. "Rendering" of the master/soap can also assist in visualisation of the final product.
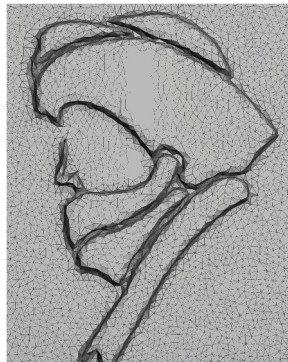
3D Design and rendering of soap master

After the above process is finalised and the client is happy with the final digital design, the digital model of the "soap"/master is 3D printed in high definition. This 3D printed model is post processed as necessary (sanding, filling, epoxy coating, etc).
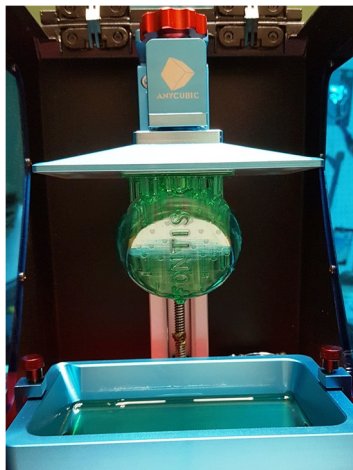
3D Printing and post-processing of master

2. **Manufacturing of the first mould:** If the client is happy with the master, I will manufacture the first rubber mould, pulled from this master. The master is glued to a backing board and a "dam" created around the master to contain the liquid rubber. The liquid rubber (a 2-part RTV curing system) is mixed, de-gassed to prevent bubbles from forming in the mould, and poured over the master inside the dam. After the rubber is cured (normally overnight), the mould is removed from the master.

3. **Manufactured of multiple cavity moulds:** If the client has requested multiple-cavity mould/(s) then I will use the single mould produced above to cast resin masters/"soaps" to be used in the production of the multiple cavity mould.

Resin "soaps"