Purpose

To find a fabric that has the most water resistance, therefore more durability than fabrics used in commercial tech suits.

Design/ Redesign

- The design that we proposed was using Teflon fabric as the main fabric that the swimsuit would be made of
- The redesign proposed was to put silicone on the inside of the suit to make it more comfortable for the swimmer while he/she are wearing it.

Background Information

- Most technical suits are made from a mix of silicone and nylon
- The suit is made from a hydrophilic material and to decrease drag while in the water.
- The suit increases buoyancy, which means that the swimmer will swim higher on the water, which decreases some of the resistance from the water.
- Technical suits were first used in 2008

Procedure

1) Test the water resistance of three fabrics: nylon (control), Teflon, Silicone.
2) Submerge each fabric in water for 5 minutes
3) Take the fabric out of the water and put it in the MaxQ 4450 and set it to 50 rpm and for 10 minutes.
4) Take out the fabric and take the mass of the fabrics.
5) Repeat steps 1-5 10 times.

Materials

- Teflon
- Silicone
- Nylon
- Scissors
- TYR Avictor
- MaxQ 4450