Creating a Unique Floating Concrete

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Concrete is the most used material in the world second only to water. This project was to create a concrete material that can be used to build business, residential, and infrastructural sites. This material is lighter than just standard concrete. This material can be used for fluvial, lake, and seawater construction. Prototype one was formulating and testing different concrete mixes in the form of pucks. A variety of aggregates were used to make the mix lighter - playground sand, pumice, nylon fiber, and polystyrene . Binders of cement and fly ash were also incorporated in the mixes. Prototype two was a boat made from each mix. Prototype three was a raft made from the control mix, which was the lightest, but the raft sank. Prototype four was a raft made from mix number seven in which pumice replaced sand. This raft was able to float and support the weight (8.3 lbs./3.765 kg) of a gallon bucket full of water. The Global Concrete market size is projected to grow to $749,150 million from 2022 – 2028.

Awards Won: