



Ooblek

Materials

- cornstarch, 2 cups
- water, 1 cup
- bowl
- spoon

You can use smaller or larger amounts of cornstarch and water, but make sure you always have twice as much cornstarch as water.

Method

Mix the cornstarch and water in the bowl.

The new mixture should feel like a liquid when you're stirring it slowly or pouring it, but it can be scooped up if you move fast and feels hard when you tap on it. If it is too powdery add a *little* water. If it is too runny add a *little* cornstarch.

Ooblek is tiny particles of cornstarch distributed in water.

A mixture that behaves like this, both like a liquid and a solid, is called a non-Newtonian fluid. It behaves like a liquid if moved slowly, but like a solid if moved or hit suddenly.

Why? If moved slowly, the water between the cornstarch particles allows the molecules to slide past each other, and flow like a liquid. But if moved quickly or hit, the water is squeezed out from between the cornstarch particles and they become locked together and can't move past each other, and behave like a solid.

Ooblek videos

You can find many ooblek videos online. Here are a couple:

- Ooblek slow motion video (including running on it): https://youtu.be/G1Op_1yG6lQ
- Ooblek in a physics research lab: <https://www.youtube.com/watch?v=JGfynrsdaV0>