

Non-Newtonian fluids

Material

- Corn starch
- Water
- Glass tub or transparent container

Procedure

- Put corn starch in the glass tub
- Add water and mix until the mixture reaches the consistency of cake batter/condensed milk
- Manipulate the fluid and explore its mechanical properties

Explanation

The mixture made in this activity has special properties – the viscosity changes with the stress applied to it – therefore it is called a non-Newtonian fluid. Non-Newtonian fluids do not conform to Newton's Law of Viscosity due to stress-dependent viscosity, hence their name.

The unique properties of non-Newtonian fluids are very interesting, and they can find applications in several areas such as printing, brake systems, armors, and much more.