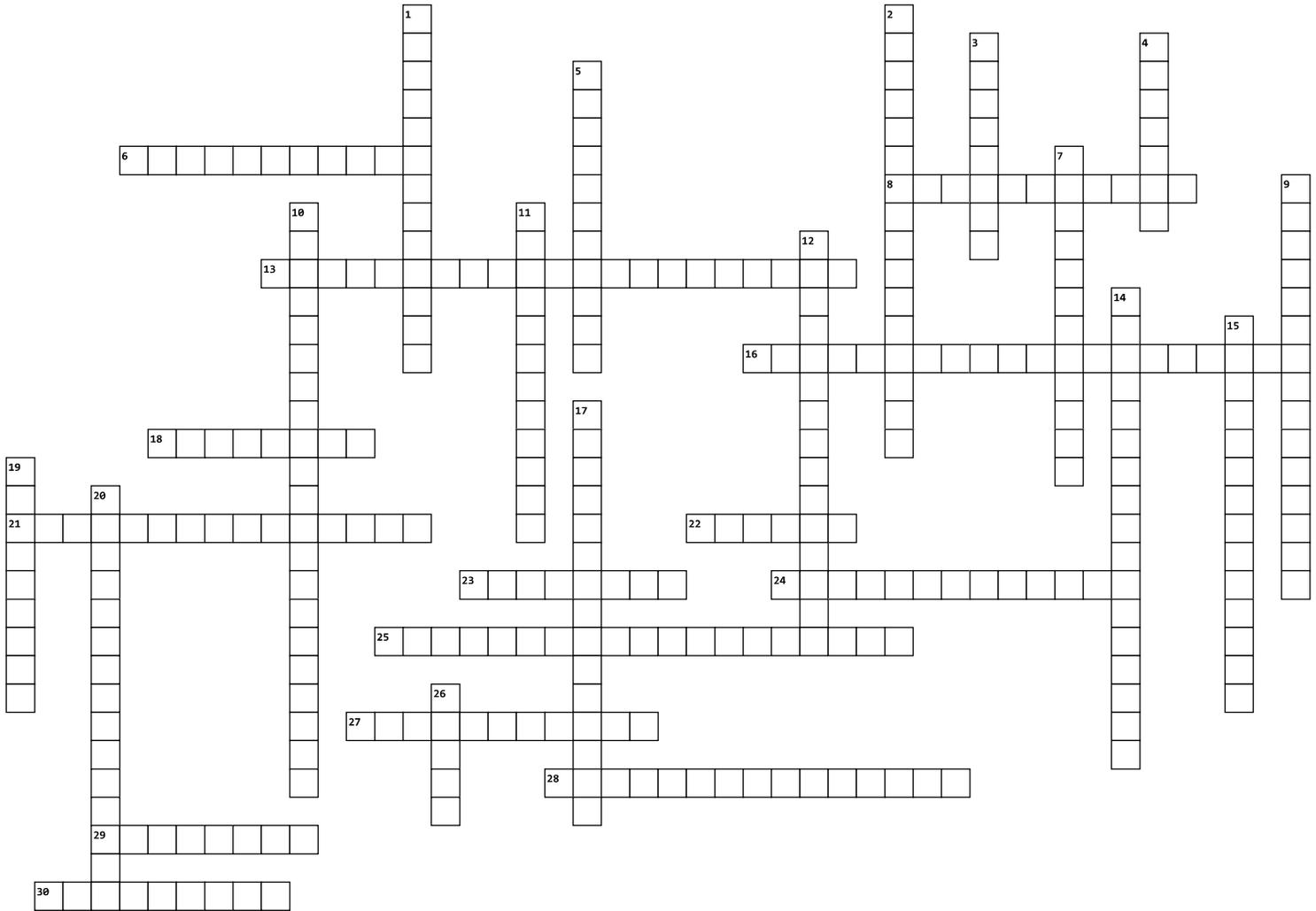


# Mechanical properties of fluids



## Across

- 6.** A hypothetical fluid with no viscosity and no resistance to shear stress.
- 8.** The ability of a liquid to flow in narrow spaces without the assistance of external forces.
- 13.** States that any object fully or partially submerged in a fluid is buoyed up by a force equal to the weight of the fluid displaced by the object.
- 16.** The pressure exerted by a fluid at equilibrium at a given point within the fluid.
- 18.** The action or property of molecules sticking together, being mutually attractive.
- 21.** A type of fluid flow where every particle follows a smooth path.
- 22.** The SI unit of pressure, equivalent to one newton per square meter.

## Down

- 1.** The branch of science concerned with forces acting on or exerted by fluids in motion.
- 2.** The pressure of a fluid in motion, associated with its velocity.
- 3.** The tendency of dissimilar particles or surfaces to cling to one another.
- 4.** The mass per unit volume of a substance.
- 5.** A law stating that the force of viscosity on a small sphere moving through a viscous fluid is proportional to the sphere's velocity and radius.
- 7.** A flow regime characterized by high momentum diffusion and low momentum convection.
- 9.** The elastic tendency of a fluid surface which makes it acquire the least surface area possible.

- 23.** The force exerted per unit area.
- 24.** The force exerted by a fluid on an object moving through it due to viscosity.
- 25.** The ratio of the viscosity of a fluid to its density.
- 27.** The pressure of a gas is inversely proportional to its volume at a constant temperature.
- 28.** The pressure exerted by a fluid at rest.
- 29.** The force exerted on an object that is partly or wholly immersed in a fluid.
- 30.** An instrument measuring atmospheric pressure.
- 10.** States that the pressure in a fluid decreases as the fluid's velocity increases.
- 11.** States that a change in pressure at any point in an incompressible fluid is transmitted throughout the fluid.
- 12.** The study of fluids and the forces on them.
- 14.** The constant speed that a freely falling object eventually reaches when the resistance prevents further acceleration.
- 15.** A type of fluid flow characterized by chaotic changes in pressure and flow velocity.
- 17.** The measure of the relative volume change of a fluid as a response to a pressure change.
- 19.** The property of a fluid that resists the force tending to cause the fluid to flow.
- 20.** A dimensionless number used to predict flow patterns in different fluid flow situations.
- 26.** Substances that can flow, such as liquids and gases.