

# Mechanical equilibrium

[@wikipedia](#)

A state of a [thermodynamic system](#) in which the sum of the forces, and torque, on each particle of the system is zero

Particularly in fluid dynamics it means that fluid pressure  $p(t, \mathbf{r}) = \text{const}$  is defined for any spatial location  $\mathbf{r}$  at any moment of time  $t$  and it stays the same at all locations and not changing over time