**Answer on** Question #69831, Physics / Mechanics | Relativity

fluid viscosity dimensional analysis

**Solution:**

The viscosity μ is often called the absolute or dynamic viscosity to distinguish it from the kinematic viscosity $\upsilon = \frac{\mu}{\rho}$ (1), where ρ is the fluid density

Of (1) $\Rightarrow$ $\mu = \upsilon\rho$ (2)

Dimension for kinematic viscosity: $\frac{L^2}{T}$

Dimension for fluid density: $\frac{M}{L^3}$

Of (2) $\Rightarrow$ dimension for viscosity: $\frac{L^2}{T} \times \frac{M}{L^3} = \frac{M}{LT}$

**Answer:**

$\frac{M}{LT}$