

Answer to Question #61117, Chemistry / Physical Chemistry

What is the dimensional formula and SI units for pressure?

Answer:

$$\begin{aligned} \text{Pressure} &= \frac{\text{Force}}{\text{Area}} = \frac{\text{Mass} \times \text{Acceleration}}{\text{Length} \times \text{Length}} = \frac{\text{Mass} \times \text{Velocity}}{\text{Length} \times \text{Length} \times \text{Time}} \\ &= \frac{\text{Mass} \times \text{Length}}{\text{Length} \times \text{Length} \times \text{Time} \times \text{Time}} = \frac{\text{Mass}}{\text{Length} \times \text{Time} \times \text{Time}} = \frac{M}{LT^2} \end{aligned}$$

SI units for pressure is Pascal (Pa).

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