

Quantity	BU (g, cm, μ s, K)	SI (kg, m, s, K)	
Mass Density	$\frac{\text{g}}{\text{cm}^3}$	$10^3 \frac{\text{kg}}{\text{m}^3}$	
Velocity	$\frac{\text{cm}}{\mu\text{s}}$	$10^4 \frac{\text{m}}{\text{s}}$	
Acceleration	$\frac{\text{cm}}{\mu\text{s}^2}$	$10^{10} \frac{\text{m}}{\text{s}^2}$	
Force	$\frac{\text{g-cm}}{\mu\text{s}^2}$	$10^7 \frac{\text{kg-m}}{\text{s}^2}$	10^7N
Pressure	$\frac{\text{Force}}{\text{cm}^2}$	$10^{11} \frac{\text{N}}{\text{m}^2}$	10^{11} Pa
Fracture toughness	$\frac{\text{Force}}{\text{cm}^{3/2}}$	$10^{10} \frac{\text{N}}{\text{m}^{3/2}}$	
Momentum	gm-Velocity	$10 \frac{\text{kg-m}}{\text{s}}$	
Energy	Force-cm	10^5 N-m	10^5 J
Power	$\frac{\text{Energy}}{\mu\text{s}}$	$10^{11} \frac{\text{N-m}}{\text{s}}$	10^{11} W
Surface energy	$\frac{\text{Energy}}{\text{cm}^2}$	$10^9 \frac{\text{N}}{\text{m}^2}$	$10^9 \frac{\text{J}}{\text{m}^2}$
Kinematic viscosity	$\frac{\text{cm}^2}{\mu\text{s}}$	$10^2 \frac{\text{m}^2}{\text{s}}$	
Shear viscosity	Pressure- μs	$10^5 \frac{\text{N-s}}{\text{m}^2}$	10^5 Pa-s
Specific heat	$\frac{\text{Energy}}{\text{gm-K}}$	$10^8 \frac{\text{N-M}}{\text{kg-K}}$	$10^8 \frac{\text{J}}{\text{kg-K}}$
Thermal conductivity	$\frac{\text{Power}}{\text{cm-K}}$	$10^{13} \frac{\text{W}}{\text{m-K}}$	