

Principles of Physics II (PHY 112)

Specific Heats and Latent Heats

From Tipler and Mosca, 6th ed.

Substance	Specific Heat (J/kg·K)
Aluminum	900
Copper	386
Glass	840
Lead	128
Silver	233
Water	
Ice	2050
Liquid	4180
Steam	2020

Substance	Melting Point (K)	Heat of Fusion (J/kg)	Boiling Point (K)	Heat of Vaporization (J/kg)
Water	273.15	333,500	373.15	2.257×10^6
Lead	600	24,700	2023	858,000

$$k = 1.381 \times 10^{-23} \text{ J/K}$$
$$N_A = 6.022 \times 10^{23} \text{ mol}^{-1}$$
$$R = N_A k = 8.314 \text{ J/(mol} \cdot \text{K)}$$