

DATA SHEET

1 atmosphere (Standard air pressure).....	1.01×10^5 Pa
Latent heat of vaporisation of water at constant pressure.....	22.56×10^5 J kg ⁻¹
Latent heat of fusion of ice, L_f	3.34×10^5 J kg ⁻¹
Avogadro's constant, N_A	6.022×10^{23} (g mol) ⁻¹
Charge on electron, e	1.602×10^{-19} C (negative)
Gas constant, R	8.314 J K ⁻¹ (g mol) ⁻¹
.....	0.0821 litre-atm K ⁻¹ (g mol) ⁻¹
Molecular weight of hydrogen, M	2.00×10^{-3} kg(g mol) ⁻¹
Atomic mass unit , u	1.661×10^{-27} kg = 931.5 MeV/c ²
Mass of electron, m_e	9.109×10^{-31} kg = 5.486×10^{-4} u
Mass of neutron, m_n	1.675×10^{-27} kg = 1.0087 u
Mass of proton, m_p	1.673×10^{-27} kg = 1.0073 u
Velocity of sound in air (20°C and 1 atm)	343 ms ⁻¹
Boltzmann's constant, k_B	1.381×10^{-23} JK ⁻¹
Permittivity of free space, ϵ_0	8.854×10^{-12} C ² N ⁻¹ m ⁻²
Permeability of free space, μ_0	$4\pi \times 10^{-7}$ NA ⁻²
Earth's gravitational acceleration, g	9.80 m s ⁻²
Speed of light, c	2.998×10^8 m s ⁻¹
Coulomb's constant, k	8.99×10^9 Nm ² C ⁻²
Universal gravitation constant, G	6.673×10^{-11} N m ² kg ⁻²
Planck's constant, h	6.626×10^{-34} J s
Rydbergs' constant, R_H	1.097×10^7 m ⁻¹
Density of water, ρ	1.00×10^3 kg m ⁻³
Mass of Earth.....	5.98×10^{24} kg
Average radius of Earth.....	6.37×10^6 m
Mass of Moon	7.36×10^{22} kg
Average Earth-Moon distance	3.84×10^8 m
Mass of Sun	1.99×10^{30} kg
Radius of Sun	6.96×10^8 m
Average Earth-Sun distance.....	1.496×10^{11} m
Bohr radius, a_0	5.29×10^{-11} m
Hydrogen ground state, E_0	-13.606 eV
Volume of 1 g mole ideal gas at 101.3 kPa (1 atm) and at 0°C (273 K).....	2.241×10^{-2} m ³
at 25°C (298 K).....	2.447×10^{-2} m ³
Mechanical equivalent of heat, 1 cal.....	4.186 J
Stefan's Constant, σ	5.67×10^{-8} Js ⁻¹ m ⁻² K ⁻⁴
Wien's Constant, B	2.898×10^{-3} m.K.
1 eV	1.60×10^{-19} J
Reference Intensity, I_0 , (threshold of hearing),	1×10^{-12} W m ⁻²