Fundamental Physical Constants — Adopted values

Quantity	Symbol	Value	Unit	Relative std. uncert. u_r
molar mass of ^{12}C	$M(^{12}\mathrm{C})$	12×10^{-3}	kg mol^{-1}	(exact)
molar mass constant[1] $M(^{12}\mathrm{C})/12$	M_u	1×10^{-3}	kg mol^{-1}	(exact)
conventional value of Josephson constant[2]	$K_{\mathrm{J}-90}$	483 597.9	GHz V^{-1}	(exact)
conventional value of von Klitzing constant[3]	$R_{\mathrm{K}-90}$	25 812.807	Ω	(exact)
standard atmosphere		101 325	Pa	(exact)
standard acceleration of gravity	g_n	9.806 65	m s^{-2}	(exact)

[1] The relative atomic mass $A_\mathrm{r}(\mathrm{X})$ of particle X with mass m(X) is defined by $A_\mathrm{r}(\mathrm{X}) = m(\mathrm{X})/m_\mathrm{u}$, where $m_\mathrm{u} = m(^{12}\mathrm{C})/12 = M_\mathrm{u}/N_\mathrm{A} = 1$ u is the atomic mass constant, N_A is the Avogadro constant, and u is the atomic mass unit. Thus the mass of particle X in u is $m(\mathrm{X}) = A_\mathrm{r}(\mathrm{X})$ u and the molar mass of X is $M(\mathrm{X}) = A_\mathrm{r}(\mathrm{X})M_\mathrm{u}$.

[2] This is the value adopted internationally for realizing representations of the volt using the Josephson effect.

[3] This is the value adopted internationally for realizing representations of the ohm using the quantum Hall effect.

Source: Peter J. Mohr and Barry N. Taylor, CODATA Recommended Values of the Fundamental Physical Constants: 2002, published in Review of Modern Physics **77**, 1 (2005).