Tables

Table 1. SI BASE UNITS

Quantity	Unit name	Symbol
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Amount of substance	mole	mol
Luminous intensity	candela	cd

Table 2. SI DERIVED UNIT OF TEMPERATURE

Quantity	Unit special name	Symbol
Celsius temperature	degree Celsius	°C

Table 3. SI DERIVED UNITS WITH SPECIAL NAMES AND SYMBOLS

Physical quantity	Unit special name	Unit symbol	Expression in terms of SI base and derived units	Expression in terms of SI base units
Plane angle	radian	rad		$1\ rad = 1\ m \cdot m^{-1}$
Solid angle	steradian	sr		$1\ sr = 1\ m^2 \cdot m^{-2}$
Frequency	hertz	Hz		$1\ Hz = 1\ s^{-1}$
Force	newton	N		$1\ N = 1\ m \cdot kg \cdot s^{-2}$
Pressure, stress	pascal	Pa	$N \cdot m^{-2}$	$1\ Pa = 1\ m^{-1} \cdot kg \cdot s^{-2}$
Energy, work; quantity of heat*	joule	J	$N \cdot m$ or $W \cdot s$	$1\ J = 1\ m^2 \cdot kg \cdot s^{-2}$
Power**, radiant flux	watt	W	$J \cdot s^{-1}$	$1\ W = 1\ m^2 \cdot kg \cdot s^{-3}$
Quantity of electricity, electric charge	coulomb	C		$1\ C = 1\ s \cdot A$
Electric potential, potential	volt	V	$W \cdot A^{-1}$	$1\ V = 1\ m^2 \cdot kg \cdot s^{-3} \cdot A^{-1}$

difference, electromotive force (emf)				
Electric resistance	ohm	Ω	$V \cdot A^{-1}$	$1\ \Omega = 1\ m^2 \cdot kg \cdot s^{-3} \cdot A^{-2}$
Conductance	siemens	S	$A \cdot V^{-1}$	$1\ S = 1\ m^{-2} \cdot kg^{-1} \cdot s^3 \cdot A^2$
Capacitance	farad	F	$C \cdot V^{-1}$	$1\ F = 1\ m^{-2} \cdot kg^{-1} \cdot s^4 \cdot A^2$
Magnetic flux	weber	Wb	$V \cdot s$	$1\ Wb = 1\ m^2 \cdot kg \cdot s^{-2} \cdot A^{-1}$
Magnetic flux density (magnetic induction)	tesla	T	$Wb \cdot m^{-2}$	$1\ T = 1\ kg \cdot s^{-2} \cdot A^{-1}$
Inductance	henry	H	$Wb \cdot A^{-1}$	$1\ H = 1\ m^2 \cdot kg \cdot s^{-2} \cdot A^{-2}$
Luminous flux	lumen	lm	$cd \cdot sr$	$1\ lm = 1\ m^2 \cdot m^{-2} \cdot cd$
Illuminance	lux	lx	$lm \cdot m^{-2}$	$1\ lx = 1\ m^{-2} \cdot cd$
Activity of a radionuclide	becquerel	Bq		$1\ Bq = 1\ s^{-1}$
Absorbed dose, specific energy imparted, kerma, absorbed dose index	grey	Gy	$J \cdot kg^{-1}$	$1\ Gy = 1\ m^2 \cdot s^{-2}$
Dose equivalent	sievert	Sv	$J \cdot kg^{-1}$	$1\ Sv = 1\ m^2 \cdot s^{-2}$
Catalytic activity	katal	kat		$1\ kat = 1\ mol \cdot s^{-1}$

* In electric and thermal energy, the energy unit W · s and its multiples are used.
** Special names for the unit of power are used in electric energy: the name volt–ampere (symbol 'V·A') when it is used to express the apparent power of alternating electric current, and var (symbol 'var') to express reactive electric power. The 'var' is not included in the resolutions of the General Conference on Weights and Measures (*Conférence générale des poids et mesures* or CGPM).

Table 4. PREFIXES AND THEIR SYMBOLS USED TO DESIGNATE DECIMAL MULTIPLES AND SUBMULTIPLES OF SI UNITS

Prefix	Symbol	Factor
yotta	Y	10^{24}
zetta	Z	10^{21}
exa	E	10^{18}
peta	P	10^{15}
tera	T	10^{12}
giga	G	10^{9}
mega	M	10^{6}

kilo	k	10^3
hecto	h	10^2
deca	da	10^1
deci	d	10^{-1}
centi	c	10^{-2}
milli	m	10^{-3}
micro	μ	10^{-6}
nano	n	10^{-9}
pico	p	10^{-12}
femto	f	10^{-15}
atto	a	10^{-18}
zepto	z	10^{-21}
yocto	y	10^{-24}

Table 5. DECIMAL MULTIPLES AND SUBMULTIPLES OF SI UNITS WITH SPECIAL NAMES

Quantity	Special name of unit	Symbol	Value
Volume	litre	1, L*	1 l = 1 dm^3 = 10^{-3} m^3
Mass	tonne	T	1 t = 1 Mg = 10^3 kg
Pressure, stress	bar**	bar	1 bar = 10^5 Pa = 0,1 MPa
* The symbol “l” shall be preferred. The symbol “L” may be used in cases where the symbol of litre and the number 1 may be confused due to technical reasons related to printing. ** Pursuant to the resolution of the International Committee for Weights and Measures (*Comité international des poids et mesures*, CIPM) of 1978, the use of the unit bar is no longer expedient and expanding the area of application of this unit is prohibited.			

Table 6. UNITS WHICH ARE DEFINED ON THE BASIS OF SI UNITS BUT ARE NOT DECIMAL MULTIPLES OR SUBMULTIPLES THEREOF

Quantity	Name	Symbol	Value
Plane angle	revolution		1 revolution = 2 π rad
	gon	gon	1 gon = (π/200) rad
	degree	…°	1° = (π/180) rad
	minute	…′	1' = (1/60)°
	second	…″	1" = (1/60)'
Time	minute	min	1 min = 60 s
	hour	h	1 h = 60 min = 3 600 s
	day	d	1 d = 24 h = 86 400 s

Table 7. UNITS DEFINED INDEPENDENTLY OF SI UNITS

Quantity	Name	Symbol	Definition
Mass	Unified atomic mass unit	u	1 unified atomic mass unit is equal to 1/12 of the mass of an atom of the nuclide ^{12}C.
Energy	Electronvolt	eV	1 electron volt is the kinetic energy acquired by an electron in passing through a potential difference of 1 volt in vaccum

Table 8. UNITS CONNECTED WITH SI UNITS PERMITTED IN SPECIALISED FIELDS ONLY

Quantity	Name	Symbol	Value
Vergency of optical systems	dioptre	dpt	1 dpt = 1 m^{-1}
Area of farmland and building land	are	a	1 a = 10^2 m^2
	hectare	ha	1 ha = 10^2 a = 10^4 m^2
Effective cross-sectional area in atomic physics	barn	b	1 b = 10^{-28} m^2
Mass of pearls and precious stones	metric carat	ct*	1 ct = 2 · 10^{-4} kg
Mass per unit length of textile yarns and threads	tex	tex	1 tex = 10^{-6} kg · m^{-1}
Blood pressure and pressure of other body fluids	millimetre of mercury	mm Hg	1 mm Hg = 133,322 Pa

* The symbol “ct” is in wide use, but has not been approved by the CIPM and the International Organization for Standardization (ISO).