

**The
Catalog of
Synonymous Dimensions**

by Russ Hanush

Preface

The Catalog of Synonymous Dimensions is a compilation of over 900 measurements from the literature, and their dimensionality. It is organized in two parts: an alphabetical listing and a numerical listing by dimensional coordinates, (t, d, m, q) , where each component gives the respective power of the base dimensions time, space, mass, and electric charge.

In part A the data is tabulated according to the citation found in the literature, SI units for that measurement, measurement type, the name of the synonymous dimension listed in the table, dimensional coordinates of the measurement, and a reference to the source(s) where the data was found. In part B, the data is sorted by dimensional coordinates, the respective dimension found in the table, measurement type, citation from the literature, SI units cited in the source(s), and the sources' reference.

The Catalog of Synonymous Dimensions

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Part A: alphabetical listing

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
a-1 time	s	time	time	(1,0,0,0)	CRC F78
abbe number	1	ratio	number	(0,0,0,0)	CRC F73
absolute activity	1	chemical activity	number	(0,0,0,0)	AIP 45; CRC F291
absolute density	kg·m ⁻³	density	density	(0,-3,1,0)	CRC F73
absolute gravity	kg·m ⁻³	density	density	(0,-3,1,0)	CRC F73
absolute humid- ity	kg·m ⁻³	density	density	(0,-3,1,0)	CRC F73
absolute pres- sure	Pa	pressure	pressure	(-2,-1,1,0)	CRC F73, F119
absolute specific gravity	1	ratio	number	(0,0,0,0)	CRC F73
absolute temper- ature	K	temperature	energy	(-2,2,1,0)	CRC F73
absolute viscos- ity	Pa·s	dynamic viscosity	dynamic vis- cosity	(-1,-1,1,0)	CRC F38

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Citation	SI Units	Measurement	Dimension	Dims	Reference
absorbed dose	Gy	absorbed dose	specific energy	(-2,2,0,0)	CRC F101, F134, F283, F314, F360
absorbed dose rate	Gy·s ⁻¹	absorbed dose rate	specific power	(-3,2,0,0)	CRC F360; Sz 59, 687
absorptance	1	ratio	number	(0,0,0,0)	AIP 44; CRC F73, E210
absorption coefficient	1	absorption	number	(0,0,0,0)	CRC F73
absorption cross-section (1)	1	ratio	number	(0,0,0,0)	CRC F73
absorption cross-section (2)	m ²	cross section	area	(0,2,0,0)	CRC F73
absorption factor	1	ratio	number	(0,0,0,0)	AIP 44; CRC F73
acceleration	m·s ⁻²	acceleration	linear acceleration	(-2,1,0,0)	AIP 38; CRC F283, F363; M 1-18, 3-52; MH 2416
acceptor ionization energy	J	energy	energy	(-2,2,1,0)	AIP 41; CRC F74
acceptor number density	m ⁻³	volume density	number density	(0,-3,0,0)	AIP 39
acetone number	1	ratio	number	(0,0,0,0)	CRC F74
acoustic absorption coefficient	1	ratio	number	(0,0,0,0)	CRC F73
acoustic ohm	Pa·s·m ⁻³	acoustic impedance	acoustic impedance	(-1,-4,1,0)	efunda
acoustic pressure	Pa	pressure	pressure	(-2,-1,1,0)	AIP 39
acoustic velocity	m·s ⁻¹	speed	linear velocity	(-1,1,0,0)	CRC F75
acre	m ²	area	area	(0,2,0,0)	CRC F346; M 1-16; MH 2417
acre foot	m ³	volume	volume	(0,3,0,0)	CRC F346
action	J·s	work time	angular momentum	(-1,2,1,0)	CRC F75

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Citation	SI Units	Measurement	Dimension	Dims	Reference
action integral	J·s	work time	angular momentum	(-1,2,1,0)	AIP 42
activation energy	J	energy	energy	(-2,2,1,0)	CRC F363
active mass	kg·m ⁻³	density	density	(0,-3,1,0)	CRC F75
activity	Bq	radioactivity	angular velocity	(-1,0,0,0)	AIP 40; CRC F134, F283, F314, F360; M 1-18
activity coefficient	1	chemical activity	number	(0,0,0,0)	AIP 38
admittance	S	admittance	conductance	(1,-2,-1,2)	M 15-3; Sz 58, 680
albedo	1	ratio	number	(0,0,0,0)	CRC F75
alfven number	1	ratio	number	(0,0,0,0)	CRC F76
alfven speed	m·s ⁻¹	speed	linear velocity	(-1,1,0,0)	CRC F76
amount of substance	mol	quantity	number	(0,0,0,0)	AIP 39; CRC F282, F311; M 1-18; MH 2415
ampere	A	electric current	electric current	(-1,0,0,1)	CRC F282; M 1-18
ampere hour	C	electric charge	electric charge	(0,0,0,1)	CRC F76, F346
ampere-turn	A·n	magnetomotive force	electric current	(-1,0,0,1)	CRC F346
amu	kg	mass	mass	(0,0,1,0)	AIP 39; CRC F285
angle	rad	plane angle	number	(0,0,0,0)	CRC F313
angstrom	m	distance	distance	(0,1,0,0)	CRC F284, F315, F346
angular acceleration	rad·s ⁻²	angular acceleration	angular acceleration	(-2,0,0,0)	AIP 44; CRC F77; M 1-18, 3-52; MH 2416
angular displacement	rad	plane angle	number	(0,0,0,0)	CRC F77
angular frequency	Hz	frequency	angular velocity	(-1,0,0,0)	AIP 46
angular inertia	kg·m ²	angular inertia	angular inertia	(0,2,1,0)	CRC F77

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Citation	SI Units	Measurement	Dimension	Dims	Reference
angular jerk	$\text{rad}\cdot\text{s}^{-3}$	angular jerk	angular jerk	(-3,0,0,0)	Sz 57, 694
angular momentum	J·s	angular momentum	angular momentum	(-1,2,1,0)	AIP 42; CRC F77; M 3-52
angular velocity	$\text{rad}\cdot\text{s}^{-1}$	angular velocity	angular velocity	(-1,0,0,0)	CRC F77, F283, F364; M 1-18, 3-52; MH 2416
angular wave number	m^{-1}	wave number	linear number density	(0,-1,0,0)	AIP 38
angular wave vector	m^{-1}	linear number density	linear number density	(0,-1,0,0)	AIP 39
aperture ratio	1	ratio	number	(0,0,0,0)	CRC F78
apostilb	$\text{cd}\cdot\text{m}^{-2}$	emitted luminous power density	energy flux density	(-3,0,1,0)	CRC F346
apparent power	W	power	power	(-3,2,1,0)	M 15-3
are	m^2	area	area	(0,2,0,0)	CRC F346; M 1-19
area	m^2	area	area	(0,2,0,0)	AIP 40; CRC F77, F283, F363; M 1-18, 3-52; MH 2416
area density	$\text{kg}\cdot\text{m}^{-2}$	area density	area density	(0,-2,1,0)	Sz 57, 672
area number density	m^{-2}	area number density	area number density	(0,-2,0,0)	Wikipedia: number density
assay ton	kg	mass	mass	(0,0,1,0)	M 1-17
astronomical unit	m	distance	distance	(0,1,0,0)	CRC F78, F346
astronomical year	s	time	time	(1,0,0,0)	CRC F78
atmosphere	Pa	pressure	pressure	(-2,-1,1,0)	CRC F78, F284, F346; MH 2421
atomic attenuation coefficient	m^2	atomic attenuation	area	(0,2,0,0)	AIP 45; Sz 59
atomic energy	J	energy	energy	(-2,2,1,0)	CRC F79
atomic heat capacity	$\text{J}\cdot\text{K}^{-1}$	ratio	number	(0,0,0,0)	CRC F79
atomic mass	kg	mass	mass	(0,0,1,0)	AIP 39

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Citation	SI Units	Measurement	Dimension	Dims	Reference
atomic number	1	quantity	number	(0,0,0,0)	AIP 44; CRC F79
atomic stopping power	J·m ²	atomic stopping power	atomic stopping power	(-2,4,1,0)	AIP 43
atomic volume	m ³ ·mol ⁻¹	molar volume	volume	(0,3,0,0)	CRC B209
attenuation factor	m ⁻¹	attenuation	linear number density	(0,-1,0,0)	AIP 44
azimuth	rad	plane angle	number	(0,0,0,0)	CRC F80
bag	m ³	volume	volume	(0,3,0,0)	CRC F346
bar	Pa	pressure	pressure	(-2,-1,1,0)	CRC F80, F284, F315, F346; MH 2421
barleycorn	m	distance	distance	(0,1,0,0)	CRC F346
barn	m ²	cross section	area	(0,2,0,0)	CRC F80, F284, F315, F346; M 1-19
barrel	m ³	volume	volume	(0,3,0,0)	CRC F346
barrer	mol·m ⁻¹ ·s ⁻¹ ·Pa ⁻¹	gas permeability	gas permeability	(1,0,-1,0)	Wikipedia
barye	Pa	pressure	pressure	(-2,-1,1,0)	CRC F80, F346
beat	s	time	time	(1,0,0,0)	CRC F80
beat frequency	Hz	frequency	angular velocity	(-1,0,0,0)	CRC F80
becquerel	Bq	radioactivity	angular velocity	(-1,0,0,0)	CRC F81, F134, F283, F314, F346, F360; Sz 54, 667
bel	Np	acoustic loudness	number	(0,0,0,0)	CRC F81
bending moment	N·m	torque	energy	(-2,2,1,0)	AIP 42
biot	A	electric current	electric current	(-1,0,0,1)	CRC F346
board foot	m ³	volume	volume	(0,3,0,0)	CRC F346; M 1-17
boiling point	K	temperature	energy	(-2,2,1,0)	CRC B211, B455, D187, F64
bolt	m	distance	distance	(0,1,0,0)	CRC F346

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Citation	SI Units	Measurement	Dimension	Dims	Reference
bond energy	J	energy	energy	(-2,2,1,0)	CRC F82
bond length	m	distance	distance	(0,1,0,0)	CRC F82
bounce	$\text{m}\cdot\text{s}^{-3}$	Change in acceleration	linear jerk	(-3,1,0,0)	Visser
bragg angle	rad	plane angle	number	(0,0,0,0)	AIP 45
breadth	m	distance	distance	(0,1,0,0)	AIP 38
brightness	$\text{cd}\cdot\text{m}^{-2}$	emitted luminous power density	energy density flux	(-3,0,1,0)	CRC F83
btu	J	energy	energy	(-2,2,1,0)	CRC F83, F285, F346; MH 2422
bucket	m^3	volume	volume	(0,3,0,0)	CRC F347
bulk expansion coefficient	K^{-1}	thermal expansion	thermal expansion	(2,-2,-1,0)	CRC F364
bulk modulus	Pa	volume elasticity	pressure	(-2,-1,1,0)	AIP 42; CRC B214, F64, F84, F363; Sz 302, 596, 599
bulk strain	1	ratio	number	(0,0,0,0)	CRC F318
burgers vector	m	distance	distance	(0,1,0,0)	AIP 38
bushel	m^3	volume	volume	(0,3,0,0)	CRC F347; M 1-16
butt	m^3	volume	volume	(0,3,0,0)	CRC F347
cable length	m	distance	distance	(0,1,0,0)	CRC F347; M 1-16
caliber	m	distance	distance	(0,1,0,0)	CRC F347
calorie	J	energy	energy	(-2,2,1,0)	CRC F84, F285, F347; MH 2422
candela	Cd	emitted luminous power	power	(-3,2,1,0)	CRC F84, F282, F347; M 1-18; MH 2415
candlepower	Cd	emitted luminous power	power	(-3,2,1,0)	CRC E210
capacitance	F	capacitance	capacitance	(2,-2,-1,2)	AIP 41; AQ 28; CRC F84, F134, F283, F313; M 1-18, 15-3; MH 2415

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Citation	SI Units	Measurement	Dimension	Dims	Reference
capacitive reactance	Ω	<i>i resistance</i>	resistance	(-1,2,1,-2)	M 15-3
carat	kg	mass	mass	(0,0,1,0)	CRC F347; M 1-17
carrier susceptibility	$C \cdot s \cdot kg^{-1}$	carrier susceptibility	mobility	(1,0,-1,1)	CRC F377
cental	kg	mass	mass	(0,0,1,0)	CRC F347; M 1-17
centimeter of mercury	Pa	pressure	pressure	(-2,-1,1,0)	CRC F348
centimeter of water	Pa	pressure	pressure	(-2,-1,1,0)	CRC F348
chain	m	distance	distance	(0,1,0,0)	CRC F348; M 1-16
characteristic rotational temperature	K	temperature	energy	(-2,2,1,0)	AIP 46
characteristic vibrational temperature	K	temperature	energy	(-2,2,1,0)	AIP 46
charge of particle	C	electric charge	electric charge	(0,0,0,1)	CRC F329
chemical affinity	$J \cdot mol^{-1}$	energy	energy	(-2,2,1,0)	AIP 40
chemical potential	$J \cdot mol^{-1}$	potential energy	energy	(-2,2,1,0)	AIP 45
circular inch	m^2	area	area	(0,2,0,0)	CRC F348; M 1-16
circular mil	m^2	area	area	(0,2,0,0)	CRC F85, F348; M 1-16
circumference	rad	plane angle	number	(0,0,0,0)	CRC F348; M 1-17
clo	$m^2 \cdot K \cdot W^{-1}$	insulation efficiency	insulation efficiency	(1,2,0,0)	CRC F348
coefficient of tension	K^{-1}	pressure increase	thermal expansion	(2,-2,-1,0)	CRC F86
coherence length	m	distance	distance	(0,1,0,0)	AIP 45; CRC F86
collision number	$m^{-3} \cdot s^{-1}$	collision rate density	molar reaction rate	(-1,-3,0,0)	CRC F290

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Citation	SI Units	Measurement	Dimension	Dims	Reference
combining weight	kg	mass per valence	mass	(0,0,1,0)	CRC F86
compensation point	K	temperature	energy	(-2,2,1,0)	CRC F87
compliance tensor	$\text{m}^2 \cdot \text{N}^{-1}$	compressibility	compressibility	(2,1,-1,0)	AIP 40
compressibility	$\text{m}^2 \cdot \text{N}^{-1}$	compressibility	compressibility	(2,1,-1,0)	AIP 45; CRC E110, F12, F86, F87; Sz 676
compressive strength	Pa	stress	pressure	(-2,-1,1,0)	CRC F64
compton wavelength	m	distance	distance	(0,1,0,0)	AIP 45; CRC F87
concentration (1)	1	ratio	number	(0,0,0,0)	CRC F363, F365, F378
concentration (2)	$\text{mol} \cdot \text{m}^{-3}$	molar concentration	volume number density	(0,-3,0,0)	AIP 38; CRC F87, F283; Sz 684
condosity	$\text{mol} \cdot \text{m}^{-3}$	molar concentration	volume number density	(0,-3,0,0)	CRC D271
conductance	S	conductance	conductance	(1,-2,-1,2)	AIP 41; AQ 28; CRC F87, F134, F283, F313; M 1-18, 15-3
conductivity	$\text{S} \cdot \text{m}^{-1}$	volume conductivity	conductivity	(1,-3,-1,2)	AIP 44; CRC E63, F87, F364; M 15-3; Sz 58
cord	m^3	volume	volume	(0,3,0,0)	CRC F348; M 1-16
coulomb	C	electric charge	electric charge	(0,0,0,1)	CRC F88, F134, F283, F348; M 1-18; MH 2415
coulomb constant	$\text{N} \cdot \text{m}^2 \cdot \text{C}^{-2}$	coulomb constant	coulomb constant	(-2,3,1,-2)	Wikipedia
crackle	$\text{m} \cdot \text{s}^{-5}$	change in snap	linear crackle	(-5,1,0,0)	Sprott, Visser
cross section	m^2	cross section	area	(0,2,0,0)	AIP 46; CRC F284
cubic expansion coefficient	K^{-1}	volume thermal expansion	thermal expansion	(2,-2,-1,0)	AIP 44

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cubic foot	m ³	volume	volume	(0,3,0,0)	CRC F348
cubic inch	m ³	volume	volume	(0,3,0,0)	CRC F348
cubic meter	m ³	volume	volume	(0,3,0,0)	CRC F349
cubic yard	m ³	volume	volume	(0,3,0,0)	CRC F349
cubit	m	distance	distance	(0,1,0,0)	CRC F349
cup	m ³	volume	volume	(0,3,0,0)	CRC F349
curie	Bq	radioactivity	angular velocity	(-1,0,0,0)	CRC F284, F315, F349, F360
curie temperature	K	temperature	energy	(-2,2,1,0)	AIP 43
current density	A·m ⁻²	surface current density	surface current density	(-1,-2,0,1)	CRC F364
dalton	kg	mass	mass	(0,0,1,0)	CRC F89
darcy	m ²	hydrodynamic permeability	area	(0,2,0,0)	CRC F349
day	s	time	time	(1,0,0,0)	CRC F89, F284, F349
debroglie wavelength	m	distance	distance	(0,1,0,0)	CRC F89
debye	C·m	electric dipole moment	electric moment	(0,1,0,1)	CRC E59, F285
debye angular frequency	Hz	frequency	angular velocity	(-1,0,0,0)	AIP 46
debye length	m	distance	distance	(0,1,0,0)	CRC F89
debye temperature	K	temperature	energy	(-2,2,1,0)	AIP 46
decay constant	Bq	radioactivity	angular velocity	(-1,0,0,0)	AIP 45
decibel	Np	acoustic loudness	number	(0,0,0,0)	CRC F89, F349; M 12-136
declination	rad	plane angle	number	(0,0,0,0)	CRC F90
degree	rad	plane angle	number	(0,0,0,0)	CRC F90, F284, F349; M 1-17

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degree API	1	ratio	number	(0,0,0,0)	M 1-29
degree baume	1	ratio	number	(0,0,0,0)	CRC F3, F80; M 1-29
degree celsius	K	temperature	energy	(-2,2,1,0)	AIP 44; CRC F134, F283; MH 2423
degree centi-grade	K	temperature	energy	(-2,2,1,0)	CRC F85, F349
degree fahrenheit	K	temperature	energy	(-2,2,1,0)	CRC F349; MH 2423
degree rankine	K	temperature	energy	(-2,2,1,0)	CRC F121, F285, F349; MH 2423
degree twaddle	1	ratio	number	(0,0,0,0)	CRC F3
denier	kg·m ⁻¹	linear density	linear density	(0,-1,1,0)	CRC F349
density	kg·m ⁻³	density	density	(0,-3,1,0)	AIP 45; CRC E44, F66, F90, F283, F302, F364; M 1-18, 3-52; MH 2416
density gradient	kg·m ⁻⁴	density gradient	density gradient	(0,-4,1,0)	CRC F364
density of states	m ⁻³ ·J ⁻¹	density of states	density of states	(2,-5,-1,0)	AIP 43
density of vibrational modes	s·m ⁻³	vibrational mode density	temporal density	(1,-3,0,0)	AIP 43
diameter	m	distance	distance	(0,1,0,0)	AIP 38; CRC F363
dielectric polarization	C·m ⁻²	electric polarization	electric flux density	(0,-2,0,1)	CRC F91
dielectric strength	V·m ⁻¹	dielectric strength	electric field	(-2,1,1,-1)	CRC F91
dielectric susceptibility	F·m ⁻¹	permittivity	permittivity	(2,-3,-1,2)	CRC F377
diffraction efficiency	1	ratio	number	(0,0,0,0)	CRC F91
diffusion coefficient	m ² ·s ⁻¹	diffusion rate	kinematic viscosity	(-1,2,0,0)	AIP 41; CRC F49, F50, F91, F283, F363; MH 2416

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diffusion tortuosity	1	ratio	number	(0,0,0,0)	CRC F364
diffusivity	$\text{m}^2 \cdot \text{s}^{-1}$	diffusion rate	kinematic viscosity	(-1,2,0,0)	CRC F49, F50, F51, F91, F363
dimensional concentration	$\text{kg} \cdot \text{m}^{-3}$	concentration	density	(0,-3,1,0)	CRC F363, F365, F378
dip	rad	plane angle	number	(0,0,0,0)	CRC F91
disintegration constant	Hz	frequency	angular velocity	(-1,0,0,0)	AIP 45
disintegration energy	J	energy	energy	(-2,2,1,0)	AIP 43
dispersion coefficient	$\text{m}^2 \cdot \text{s}^{-1}$	diffusion rate	kinematic viscosity	(-1,2,0,0)	CRC F377
displacement	m	distance	distance	(0,1,0,0)	CRC F92
displacement vector	m	distance	distance	(0,1,0,0)	AIP 40
distance	m	distance	distance	(0,1,0,0)	AIP 38; CRC F363
donor ionization energy	J	energy	energy	(-2,2,1,0)	AIP 41
donor number density	m^{-3}	volume number density	volume number density	(0,-3,0,0)	AIP 39
dose equivalent	Sv	dose equivalent	specific energy	(-2,2,0,0)	CRC F314, F360
dose equivalent rate	$\text{Sv} \cdot \text{s}^{-1}$	dose equivalent rate	specific power	(-3,2,0,0)	CRC F360; Sz 687
drachm	m^3	volume	volume	(0,3,0,0)	CRC F349; M 1-16
dram (1)	m^3	volume	volume	(0,3,0,0)	CRC F349; M 1-16
dram (2)	kg	mass	mass	(0,0,1,0)	CRC F349; M 1-17
dynamic height	$\text{J} \cdot \text{kg}^{-1}$	potential energy per mass	specific energy	(-2,2,0,0)	CRC F92
dynamic meter	$\text{J} \cdot \text{kg}^{-1}$	potential energy per mass	specific energy	(-2,2,0,0)	CRC F92
dynamic pressure	Pa	pressure	pressure	(-2,-1,1,0)	CRC F93

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Citation	SI Units	Measurement	Dimension	Dims	Reference
dynamic slip resistance	Pa	pressure	pressure	(-2,-1,1,0)	CRC F378
dynamic viscosity	Pa·s	dynamic viscosity	dynamic viscosity	(-1,-1,1,0)	CRC F10, F283, F364; M 1-18, 3-52; MH 2416; Sz 57, 673
dyne	N	force	force	(-2,1,1,0)	CRC F284, F349; MH 2420
eddy mass diffusivity	$\text{m}^2 \cdot \text{s}^{-1}$	diffusion rate	kinematic viscosity	(-1,2,0,0)	CRC F364
eddy viscosity	$\text{m}^2 \cdot \text{s}^{-1}$	kinematic viscosity	kinematic viscosity	(-1,2,0,0)	CRC F93, F378
effective mass	kg	mass	mass	(0,0,1,0)	AIP 39
effective neutron cycle time	s	time	time	(1,0,0,0)	CRC F93
effective radiation	$\text{W} \cdot \text{m}^{-2}$	power per area	energy density flux	(-3,0,1,0)	CRC F93
einstein temperature	K	temperature	energy	(-2,2,1,0)	AIP 46
elastic limit	Pa	stress	pressure	(-2,-1,1,0)	CRC F93
elastic modulus	Pa	stress	pressure	(-2,-1,1,0)	CRC B214, F93, F363; M 3-52
electric charge	C	electric charge	electric charge	(0,0,0,1)	AIP 39; CRC F134, F283, F313; MH 2415
electric charge density	$\text{C} \cdot \text{m}^{-3}$	volume charge density	electric charge density	(0,-3,0,1)	AIP 45; CRC F377
electric current	A	electric current	electric current	(-1,0,0,1)	AIP 41; CRC F282, F313, F360; M 1-18, 15-3
electric current density	$\text{A} \cdot \text{m}^{-2}$	surface current density	surface current density	(-1,-2,0,1)	AIP 38
electric dipole moment	C·m	electric dipole moment	electric moment	(0,1,0,1)	AIP 39; AQ 28; CRC E59, F91, F285; Sz 58, 680

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Citation	SI Units	Measurement	Dimension	Dims	Reference
electric dipole potential	V	electric potential	electric potential	(-2,2,1,-1)	AQ 28; Sz 58, 680
electric displacement	C·m ⁻²	charge per area	electric flux density	(0,-2,0,1)	AIP 41
electric field	N·C ⁻¹	electric field	electric field	(-2,1,1,-1)	AIP 41
electric field intensity	N·C ⁻¹	electric field	electric field	(-2,1,1,-1)	CRC F94
electric field strength	N·C ⁻¹	electric field	electric field	(-2,1,1,-1)	CRC F283; M 1-18; MH 2416; Sz 58, 677
electric flux (1)	V·m	electric flux	electric flux	(-2,3,1,-1)	Wikipedia
electric flux (2)	C	electric charge	electric charge	(0,0,0,1)	AIP 47; AQ 28; Sz 58, 680
electric flux density	C·m ⁻²	electric flux density	electric flux density	(0,-2,0,1)	AQ 28; Sz 58, 680
electric polarizability	C·m ² ·V ⁻¹	electric polarizability	electric polarizability	(2,0,-1,2)	AIP 44
electric polarization	C·m ⁻²	electric polarization	electric flux density	(0,-2,0,1)	AIP 43
electric potential	V	electric potential	electric potential	(-2,2,1,-1)	AIP 43; CRC F134, F283, F313, F360; M 1-18; MH 2415
electric quadrupole moment	C·m ²	electric quadrupole moment	quadrupole moment	(0,2,0,1)	CRC E82*
electric resistance	Ω	resistance	resistance	(-1,2,1,-2)	CRC F134, F283, F313; M 1-18; MH 2416
electric susceptibility	1	ratio	number	(0,0,0,0)	AIP 46; Wikipedia
electrochemical equivalent	kg·C ⁻¹	electrochemical equivalent	electrochemical equivalent	(0,0,1,-1)	CRC F94
electrolytic conductivity	S·m ⁻¹	conductivity	conductivity	(1,-3,-1,2)	AIP 45
electromagnetic energy density	J·m ⁻³	energy density	pressure	(-2,-1,1,0)	AIP 40

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
electromagnetic moment	$J \cdot T^{-1}$	magnetic moment	magnetic moment	(-1,2,0,1)	Sz 58
electromotive force	V	electric potential	electric potential	(-2,2,1,-1)	AIP 41; AQ 28; CRC F94, F134, F313; M 1-18, 15-3
electron affinity	J	energy	energy	(-2,2,1,0)	CRC E65, F95
electron emission	$A \cdot m^{-2}$	surface density current	surface current density	(-1,-2,0,1)	CRC E407
electron number density	m^{-3}	volume density number	volume number density	(0,-3,0,0)	AIP 39
electronvolt	J	energy	energy	(-2,2,1,0)	CRC F285, F349, F360
ell	m	distance	distance	(0,1,0,0)	CRC F349
elongation	1	ratio	number	(0,0,0,0)	CRC F95
emissivity	1	ratio	number	(0,0,0,0)	AIP 44; CRC E209, F95
emittance (1)	$W \cdot m^{-2}$	power per area	energy density flux	(-3,0,1,0)	CRC F95
emittance (2)	1	ratio	number	(0,0,0,0)	CRC F95
energy	J	energy	energy	(-2,2,1,0)	AIP 41; CRC F134, F283, F313; M 1-18, 3-52
energy fluence rate	$W \cdot m^{-2}$	energy per area second	energy density flux	(-3,0,1,0)	AIP 46; Sz 59, 686
energy flux density	$W \cdot m^{-2}$	energy per area second	energy density flux	(-3,0,1,0)	Sz 59, 686
energy gap	J	energy	energy	(-2,2,1,0)	AIP 41
enthalpy (1)	$J \cdot kg^{-1}$	specific enthalpy	specific energy	(-2,2,0,0)	CRC D173, E25, F10
enthalpy (2)	$J \cdot mol^{-1}$	enthalpy	energy	(-2,2,1,0)	CRC F65
enthalpy (3)	J	enthalpy	energy	(-2,2,1,0)	AIP 41; Sz 57, 676
entropy	$J \cdot K^{-1}$	ratio	number	(0,0,0,0)	AIP 43; CRC F65; M 1-18; Sz 57, 674

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
equilibrium constant	1	chemical activity	number	(0,0,0,0)	AIP 42
equivalent conductivity	$\text{m}^2 \cdot \text{S} \cdot \text{kg}^{-1}$	conductivity per density	mass conductivity	(1,0,-2,2)	CRC F87
equivalent weight	kg	mass per valence	mass	(0,0,1,0)	CRC F96
erg	J	energy	energy	(-2,2,1,0)	CRC F284, F349
escape velocity	$\text{m} \cdot \text{s}^{-1}$	velocity	linear velocity	(-1,1,0,0)	CRC F96
evaporation	$\text{kg} \cdot \text{m}^{-2} \cdot \text{s}^{-1}$	evaporation	mass flux density	(-1,-2,1,0)	CRC E407
exchange integral	J	energy	energy	(-2,2,1,0)	AIP 42
excitance	$\text{W} \cdot \text{m}^{-2}$	power per area	energy flux density	(-3,0,1,0)	CRC F97
exposure	$\text{C} \cdot \text{kg}^{-1}$	exposure	exposure	(0,0,-1,1)	AIP 44; CRC F316, F360
extinction cross section	m^2	cross section	area	(0,2,0,0)	CRC F97, F123
f number	1	ratio	number	(0,0,0,0)	CRC F99
farad	F	capacitance	capacitance	(2,-2,-1,2)	CRC F134, F283, F313; M 1-18; MH 2415;
faraday constant	$\text{C} \cdot \text{mol}^{-1}$	molar charge	electric charge	(0,0,0,1)	CRC F98; M 1-21
fathom	m	distance	distance	(0,1,0,0)	CRC F349; M 1-16; MH 2417
fermi	m	distance	distance	(0,1,0,0)	CRC F98, F315, F349; M 1-21
fermi energy	J	energy	energy	(-2,2,1,0)	AIP 41
fine structure separation	m^{-1}	linear number density	linear number density	(0,-1,0,0)	CRC E65
firkin	m^3	volume	volume	(0,3,0,0)	CRC F349
first hyperpolarizability	$\text{C}^3 \cdot \text{m}^3 \cdot \text{J}^{-2}$	first hyperpolarizability	first hyperpolarizability	(4,-1,-2,3)	NIST

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
first hypersusceptibility	$C \cdot m \cdot J^{-1}$	first hypersusceptibility	first hypersusceptibility	(2,-1,-1,1)	efunda
flow resistance	N	force	force	(-2,1,1,0)	CRC F363, F366
fluence	m^{-2}	particles per area	area number density	(0,-2,0,0)	CRC F360; Sz 59, 688
fluence rate	$m^{-2} \cdot s^{-1}$	particle rate	fluence particle density	(-1,-2,0,0)	AIP 46; CRC F360; Sz 59, 688
fluid head	m	distance	distance	(0,1,0,0)	CRC F363
fluidity	$s^{-1} \cdot Pa^{-1}$	fluidity	fluidity	(1,1,-1,0)	CRC F98
flux density	$m^{-2} \cdot s^{-1}$	particle rate	fluence particle density	(-1,-2,0,0)	AIP 46; Sz 59, 688
foot	m	distance	distance	(0,1,0,0)	CRC F349; M 1-16; MH 2417
foot of water	Pa	pressure	pressure	(-2,-1,1,0)	CRC F350
foot-candle	lx	received luminous power density	energy density	(-3,0,1,0)	CRC E210, F99, F104, F350; M 1-21
foot-lambert	$cd \cdot m^{-2}$	emitted luminous power density	energy density	(-3,0,1,0)	CRC E210, F99, F350; M 1-22
foot-pound	$N \cdot m$	torque	energy	(-2,2,1,0)	MH 2422
foot-pound-force	$N \cdot m$	torque	energy	(-2,2,1,0)	M 1-22
foot-poundal	$N \cdot m$	torque	energy	(-2,2,1,0)	CRC F350; M 1-22; MH 2422;
force	N	force	force	(-2,1,1,0)	AIP 41; CRC F134, F283, F313, F363; M 1-18, 3-52; MH 2415
franklin	C	electric charge	electric charge	(0,0,0,1)	CRC F350
free energy	J	energy	energy	(-2,2,1,0)	AIP 41
frequency	Hz	frequency	angular velocity	(-1,0,0,0)	AIP 38; CRC F134, F283, F313, F363; M 1-18, 3-52; MH 2416
friction coefficient	1	ratio	number	(0,0,0,0)	CRC F16, F100

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
fugacity	Pa	pressure	pressure	(-2,-1,1,0)	CRC F100, F291
furlong	m	distance	distance	(0,1,0,0)	CRC F350; M 1-16
g	$\text{m}\cdot\text{s}^{-2}$	acceleration	linear acceleration	(-2,1,0,0)	CRC F363; Sz 57, 673
g-factor	$\text{kg}\cdot\text{s}^{-1}\cdot\text{C}^{-1}\cdot\text{T}^{-1}$	ratio	number	(0,0,0,0)	AIP 38
gal	$\text{m}\cdot\text{s}^{-2}$	acceleration	linear acceleration	(-2,1,0,0)	CRC F100, F339, F350; M 1-22
gallon	m^3	volume	volume	(0,3,0,0)	CRC F350; M 1-16; MH 2418
gamma (1)	kg	mass	mass	(0,0,1,0)	CRC F350; Sz 61
gamma (2)	T	magnetic flux density	magnetic flux density	(-1,0,1,-1)	CRC F350; M 1-22
gauge pressure	Pa	pressure	pressure	(-2,-1,1,0)	CRC F119
gauss	T	magnetic flux density	magnetic flux density	(-1,0,1,-1)	CRC F100, F284, F340, F350; M 1-22
geepound	kg	mass	mass	(0,0,1,0)	CRC F350
geopotential height	$\text{J}\cdot\text{kg}^{-1}$	potential energy per mass	specific energy	(-2,2,0,0)	CRC F100
geopotential meter	$\text{J}\cdot\text{kg}^{-1}$	potential energy per mass	specific energy	(-2,2,0,0)	CRC F101
gilbert	$\text{A}\cdot\text{n}$	magnetomotive force	electric current	(-1,0,0,1)	CRC F101, F340, F350
gill	m^3	volume	volume	(0,3,0,0)	CRC F350; M 1-16
gon	rad	plane angle	number	(0,0,0,0)	CRC F350
GPU	$\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}\cdot\text{Pa}^{-1}$	gas permeance	gas permeance	(1,-1,-1,0)	Wikipedia
grade	rad	plane angle	number	(0,0,0,0)	M 1-22
grain	kg	mass	mass	(0,0,1,0)	CRC F350; M 1-17; MH 2419
gram	kg	mass	mass	(0,0,1,0)	CRC F101, F351; MH 2419
gravitational constant	$\text{m}^3\cdot\text{kg}^{-1}\cdot\text{s}^{-2}$	gravitational constant	gravitational constant	(-2,3,-1,0)	CRC F101

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
gray	Gy	absorbed dose	specific energy	(-2,2,0,0)	CRC F101, F134, F283, F314, F351, F360
growth rate	s^{-1}	rate	angular velocity	(-1,0,0,0)	AIP 44
gunter's chain	m	distance	distance	(0,1,0,0)	M 1-16
gyromagnetic ratio	$s^{-1}\cdot T^{-1}$	magneton per angular momentum	exposure	(0,0,-1,1)	AIP 44
half-life	s	time	time	(1,0,0,0)	AIP 43; CRC B227, F102
hall coefficient	$m^3\cdot C^{-1}$	hall coefficient	hall coefficient	(0,3,0,-1)	AIP 40, CRC F303
hand	m	distance	distance	(0,1,0,0)	CRC F351; M 1-16
hardness (1)	Pa	hardness	pressure	(-2,-1,1,0)	CRC E106
hardness (2)	$kg\cdot m^{-2}$	area density	area density	(0,-2,1,0)	CRC D38
hartree	J	energy	energy	(-2,2,1,0)	CRC F219
head	$J\cdot kg^{-1}$	potential energy per mass	specific energy	(-2,2,0,0)	CRC F366
heat	J	heat	energy	(-2,2,1,0)	CRC F102; MH 2415
heat capacity (1)	$J\cdot kg^{-1}$	heat capacity (b)	specific energy	(-2,2,0,0)	CRC D174
heat capacity (2)	$J\cdot K^{-1}$	ratio	number	(0,0,0,0)	AIP 41; CRC F102; Sz 57, 674
heat capacity (3)	$J\cdot kg^{-1}\cdot K^{-1}$	specific heat capacity	mass concentration	(0,0,-1,0)	CRC F363
heat capacity (4)	$J\cdot mol^{-1}\cdot K^{-1}$	ratio	number	(0,0,0,0)	CRC B211, D176
heat content	$J\cdot kg^{-1}$	heat content	specific energy	(-2,2,0,0)	CRC D174
heat effect	J	heat	energy	(-2,2,1,0)	CRC F102
heat equivalent	$J\cdot kg^{-1}$	specific energy	specific energy	(-2,2,0,0)	CRC F102
heat flux	W	heat flow rate	power	(-3,2,1,0)	CRC F363; Sz 57, 677
heat flux density	$J\cdot m^{-2}\cdot s^{-1}$	heat power density	energy density flux	(-3,0,1,0)	CRC F363, 366; Sz 677

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
heat of vaporization	$\text{J}\cdot\text{kg}^{-1}$	specific heat (a)	specific energy	(-2,2,0,0)	CRC F363
heat source power	$\text{W}\cdot\text{m}^{-3}$	heat source power	heat source power	(-3,-1,1,0)	CRC F366
heat transfer coefficient	$\text{W}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$	heat transfer	particle flux density	(-1,-2,0,0)	AIP 38; CRC F116, F363; Sz 57, 675
hectare	m^2	area	area	(0,2,0,0)	CRC F351; MH 2417
hefner	Cd	emitted luminous power	power	(-3,2,1,0)	CRC F110, F351
height	m	distance	distance	(0,1,0,0)	AIP 38; CRC F363
henry	H	inductance	inductance	(0,2,1,-2)	CRC F103, F134, F283, F313; M 1-18; MH 2416
hertz	Hz	frequency	angular velocity	(-1,0,0,0)	CRC F103, F134, F283; M 1-18; MH 2416
hogshead	m^3	volume	volume	(0,3,0,0)	CRC F351
hole number density	m^{-3}	volume number density	volume number density	(0,-3,0,0)	AIP 39
homogenous nucleation limit	$\text{m}^{-3}\cdot\text{s}^{-1}$	superheat limit	molar reaction rate	(-1,-3,0,0)	CRC C721
horsepower	W	power	power	(-3,2,1,0)	CRC F103, F351; MH 2422
hour	s	time	time	(1,0,0,0)	CRC F284, F351
humid heat	kg^{-1}	heat capacity (c)	mass concentration	(0,0,-1,0)	CRC F363, F364
humidity	$\text{kg}\cdot\text{m}^{-3}$	density	density	(0,-3,1,0)	CRC F103
hundredweight	kg	mass	mass	(0,0,1,0)	CRC F351; M 1-17; MH 2419
hydrogen equivalent	mol^{-1}	quantity	number	(0,0,0,0)	CRC F103
hydrogen ion concentration	$\text{mol}\cdot\text{m}^{-3}$	molar concentration	volume number density	(0,-3,0,0)	CRC F103

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference	
hydrostatic pressure	Pa	pressure	pressure	(-2,-1,1,0)	CRC F104	
hysterisis loss	$\text{J}\cdot\text{m}^{-3}$	hysterisis loss	pressure	(-2,-1,1,0)	CRC E128	
illuminance	lx	received luminous power density	energy density	flux	(-3,0,1,0)	AIP 41; CRC E210, F104, F134, F283, F314, F341; M 1-18
illumination	lx	received luminous power density	energy density	flux	(-3,0,1,0)	CRC E210, F104; MH 2416
impact pressure	Pa	pressure	pressure	(-2,-1,1,0)	CRC F104	
impedance	Ω	impedance	resistance	(-1,2,1,-2)	CRC F104; M 15-3; Sz 58, 679	
impulse	$\text{kg}\cdot\text{m}\cdot\text{s}^{-1}$	momentum	momentum	(-1,1,1,0)	AIP 42; M 3-52; Sz 57, 673	
inch	m	distance	distance	(0,1,0,0)	CRC F284, F351; M 1-16; MH 2417	
inch of mercury	Pa	pressure	pressure	(-2,-1,1,0)	CRC F351	
inch of water	Pa	pressure	pressure	(-2,-1,1,0)	CRC F351	
index of refraction	1	ratio	number	(0,0,0,0)	CRC F105	
inductance	H	inductance	inductance	(0,2,1,-2)	AQ 28; CRC F134, F283, F313; M 1-18; MH 2416	
inductive reactance	Ω	<i>i resistance</i>	resistance	(-1,2,1,-2)	M 15-3	
inertia	kg	mass	mass	(0,0,1,0)	CRC F105	
intensity of magnetization	T	magnetic flux density	magnetic density	flux	(-1,0,1,-1)	AQ 28; CRC F105
intensity of radiation	$\text{W}\cdot\text{m}^{-2}$	wave power density	energy density	flux	(-3,0,1,0)	CRC F105
international candle	Cd	emitted luminous power	power	(-3,2,1,0)	CRC F106	
intrinsic number density	m^{-3}	volume density	number	volume number density	(0,-3,0,0)	AIP 39
iodine number	1	ratio	number	(0,0,0,0)	CRC F106	

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
ion number density	m^{-3}	volume number density	volume number density	(0,-3,0,0)	Sz 59, 686
ion size	m	distance	distance	(0,1,0,0)	CRC F106
ionic charge number	1	quantity	number	(0,0,0,0)	AIP 40
ionic radius	m	distance	distance	(0,1,0,0)	CRC F106
ionization potential	J	energy	energy	(-2,2,1,0)	CRC E80, E87, F106
ips	$m \cdot s^{-1}$	speed	linear velocity	(-1,1,0,0)	CRC F352
irradiance	$W \cdot m^{-2}$	received wave energy	energy flux density	(-3,0,1,0)	CRC E209, F107; Sz 58, 681
jerk	$m \cdot s^{-3}$	Change in acceleration	linear jerk	(-3,1,0,0)	Sandin, Sprott, Schot, Visser
jolt	$m \cdot s^{-3}$	Change in acceleration	linear jerk	(-3,1,0,0)	Visser
joule	J	energy	energy	(-2,2,1,0)	CRC F107, F134, F283, F313, F352; M 1-18, 3-52; MH 2415, 2422
jounce	$m \cdot s^{-4}$	change in jerk	linear snap	(-4,1,0,0)	Sprott, Visser
kayser	m^{-1}	wave number	linear number density	(0,-1,0,0)	M 1-22
kelvin	K	temperature	energy	(-2,2,1,0)	CRC F108, F282, F352; M 1-18; MH 2415
kerma	Gy	absorbed dose	specific energy	(-2,2,0,0)	AIP 42; CRC F134, F360
kerma rate	$Gy \cdot s^{-1}$	absorbed dose rate	specific power	(-3,2,0,0)	CRC F360
kilderkin	m^3	volume	volume	(0,3,0,0)	CRC F352
kilogram	kg	mass	mass	(0,0,1,0)	CRC F108, F282, F352; M 1-18; MH 2415
kinematic viscosity	$m^2 \cdot s^{-1}$	kinematic viscosity	kinematic viscosity	(-1,2,0,0)	AIP 45; CRC F37, F108, F283, F339; M 1-18, 3-52; MH 2416; Sz 57, 673

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
kinetic energy	J	energy	energy	(-2,2,1,0)	AIP 41; CRC F108
kip	N	force	force	(-2,1,1,0)	CRC F353; M 1-23
knot	$\text{m}\cdot\text{s}^{-1}$	speed	linear velocity	(-1,1,0,0)	CRC F108, F353; M 1-16
kph	$\text{m}\cdot\text{s}^{-1}$	speed	linear velocity	(-1,1,0,0)	CRC F352
lambert	$\text{cd}\cdot\text{m}^{-2}$	emitted luminous power density	energy flux density	(-3,0,1,0)	CRC E210, F108, F353; M 1-23
land mile	m	distance	distance	(0,1,0,0)	CRC F126
langley	$\text{J}\cdot\text{m}^{-2}$	heat transmission	surface tension	(-2,0,1,0)	CRC F109, F353; M 1-23
larmor circular frequency	Hz	frequency	angular velocity	(-1,0,0,0)	AIP 46
last	m^3	volume	volume	(0,3,0,0)	CRC F353
latent heat of phase change	$\text{J}\cdot\text{kg}^{-1}$	specific heat (a)	specific energy	(-2,2,0,0)	CRC F363, F364, F377
latent heat of vaporization	J	heat	energy	(-2,2,1,0)	CRC F109
lattice energy	$\text{J}\cdot\text{mol}^{-1}$	molar energy	energy	(-2,2,1,0)	CRC D101, F109
lattice plane spacing	m	distance	distance	(0,1,0,0)	AIP 38
lattice vector	m	distance	distance	(0,1,0,0)	AIP 43
league	m	distance	distance	(0,1,0,0)	CRC F353; M 1-16
length	m	distance	distance	(0,1,0,0)	AIP 39; CRC F109, F282, F363; M 1-18, 3-52; MH 2415
level width	J	energy	energy	(-2,2,1,0)	AIP 46
light year	m	distance	distance	(0,1,0,0)	CRC F109, F353
limit of super-heat	$\text{m}^{-3}\cdot\text{s}^{-1}$	nucleation density rate	molar reaction rate	(-1,-3,0,0)	CRC C721
line (1)	m	distance	distance	(0,1,0,0)	CRC F353
line (2)	Wb	magnetic flux	magnetic flux	(-1,2,1,-1)	CRC F353

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
lineal energy	$\text{J}\cdot\text{m}^{-1}$	linear energy density	force	(-2,1,1,0)	CRC F360
linear attenuation coefficient	m^{-1}	attenuation	linear number density	(0,-1,0,0)	AIP 45; CRC F73; Sz 59, 686
linear energy transfer	$\text{J}\cdot\text{m}^{-1}$	energy transfer	force	(-2,1,1,0)	CRC F360
linear jerk	$\text{m}\cdot\text{s}^{-3}$	linear jerk	linear jerk	(-3,1,0,0)	Sz 57, 694
linear number density	m^{-1}	linear number density	linear number density	(0,-1,0,0)	Wikipedia: number density
linear stopping power	$\text{J}\cdot\text{m}^{-1}$	stopping power	force	(-2,1,1,0)	AIP 43
linear strain	1	ratio	number	(0,0,0,0)	AIP 38
linear thermal expansion coefficient	K^{-1}	linear thermal expansion	thermal expansion	(2,-2,-1,0)	CRC F128; Sz 57, 676
link	m	distance	distance	(0,1,0,0)	CRC F353; M 1-16
liter	m^3	volume	volume	(0,3,0,0)	CRC F284, F353; MH 2418
liter-atmosphere	J	energy	energy	(-2,2,1,0)	CRC F353
liter-bar	J	energy	energy	(-2,2,1,0)	CRC F353
logarithmic decrement	Np	acoustic loudness	number	(0,0,0,0)	AIP 46; CRC F317
london penetration depth	m	distance	distance	(0,1,0,0)	AIP 45
long ton	kg	mass	mass	(0,0,1,0)	M 1-17
lorenz coefficient	$\text{V}^2\cdot\text{K}^{-2}$	lorenz coefficient	lorenz coefficient	(0,0,0,-2)	AIP 42
loss angle	rad	plane angle	number	(0,0,0,0)	AIP 44
loudness level	Np	acoustic loudness	number	(0,0,0,0)	AIP 42
lumen	lm	received luminous power	power	(-3,2,1,0)	CRC E210, F110, F134, F283, F314, F353; M 1-18; MH 2416

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation		SI Units	Measurement	Dimension		Dims	Reference
luminance		$\text{cd}\cdot\text{m}^{-2}$	emitted luminous power density	energy density	flux	(-3,0,1,0)	CRC E207, E210, F110, F283, F341; M 1-18; MH 2416
luminous density		$\text{lm}\cdot\text{s}\cdot\text{m}^{-3}$	energy density	pressure		(-2,-1,1,0)	CRC E210
luminous	efficiency	$\text{lm}\cdot\text{W}^{-1}$	ratio	number		(0,0,0,0)	AIP 42; CRC E210
luminous	efficiency	1	ratio	number		(0,0,0,0)	CRC E210
luminous	emittance	lx	received luminous power density	energy density	flux	(-3,0,1,0)	CRC E210, F97
luminous energy		$\text{lm}\cdot\text{s}$	luminous energy	energy		(-2,2,1,0)	CRC E210
luminous	excitance	lx	received luminous power density	energy density	flux	(-3,0,1,0)	CRC E210, F97
luminous flux		lm	received luminous power	power		(-3,2,1,0)	AIP 47; CRC E210, F110, F134, F283, F314; M 1-18; MH 2416
luminous	flux density	lx	received luminous power density	energy density	flux	(-3,0,1,0)	CRC E210
luminous	intensity	Cd	emitted luminous power	power		(-3,2,1,0)	AIP 41; CRC E210, F110, F282; M 1-18; MH 2415
lux		lx	received luminous power density	energy density	flux	(-3,0,1,0)	CRC E210, F104, F134, F283, F314, F353; M 1-18; MH 2416
mach number		1	ratio	number		(0,0,0,0)	CRC F110
macroscopic cross section		m^{-1}	area per volume	linear number density		(0,-1,0,0)	AIP 47
magnetic	diffusivity	$\text{m}^2\cdot\text{s}^{-1}$	magnetic diffusivity	kinematic viscosity		(-1,2,0,0)	CRC F331
magnetic	dipole moment	$\text{J}\cdot\text{T}^{-1}$	magnetic moment	magnetic moment		(-1,2,0,1)	AIP 39; CRC B228
magnetic field		$\text{A}\cdot\text{n}\cdot\text{m}^{-1}$	magnetic strength	field	magnetic field	(-1,-1,0,1)	AQ 28
magnetic	field intensity	$\text{A}\cdot\text{n}\cdot\text{m}^{-1}$	magnetic strength	field	magnetic field	(-1,-1,0,1)	CRC F111; M 15-4; Sz 678

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation		SI Units	Measurement		Dimension	Dims	Reference
magnetic field strength		$A \cdot m^{-1}$	magnetic strength	field	magnetic field	(-1,-1,0,1)	AIP 41; CRC F283; M 1-18; MH 2416; Sz 58, 678
magnetic flux		Wb	magnetic flux		magnetic flux	(-1,2,1,-1)	AQ 28; CRC F111, F134, F283, F313; M 1-18, 15-4; MH 2416
magnetic flux density		T	magnetic flux density		magnetic flux density	(-1,0,1,-1)	AIP 41; AQ 28; CRC F134, F283, F313; M 1-18, 15-4; MH 2416
magnetic induction		T	magnetic flux density		magnetic flux density	(-1,0,1,-1)	AQ 28; CRC F111
magnetic moment		$J \cdot T^{-1}$	magnetic moment		magnetic moment	(-1,2,0,1)	CRC E82, F111, F115
magnetic permeability		$H \cdot m^{-1}$	magnetic permeability		magnetic permeability	(0,1,1,-2)	CRC F111, F364, F377
magnetic permeance		H	magnetic permeance		inductance	(0,2,1,-2)	Sz 58, 679
magnetic polarization		T	magnetic flux density		magnetic flux density	(-1,0,1,-1)	Sz 58
magnetic pole		Wb	magnetic flux		magnetic flux	(-1,2,1,-1)	CRC F111
magnetic pole strength		Wb	magnetic flux		magnetic flux	(-1,2,1,-1)	AQ 28
magnetic potential difference		$A \cdot m$	magnetomotive force		electric current	(-1,0,0,1)	AIP 43; CRC F111; M 1-18; Sz 58
magnetic pressure		Pa	pressure		pressure	(-2,-1,1,0)	CRC F330
magnetic quantum number		1	quantum number		number	(0,0,0,0)	AIP 39
magnetic susceptibility (1)		1	ratio		number	(0,0,0,0)	AIP 46; Wikipedia
magnetic susceptibility (2)		$H \cdot m^{-1}$	magnetic permeability		magnetic permeability	(0,1,1,-2)	CRC F127
magnetic vector potential		$Wb \cdot m^{-1}$	linear magnetic flux density		linear magnetic flux density	(-1,1,1,-1)	AIP 41; Sz 58

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
magnetization	$A \cdot n \cdot m^{-1}$	magnetic field strength	magnetic field	(-1,-1,0,1)	AIP 42
magnetomotive force	$A \cdot n$	magnetomotive force	electric current	(-1,0,0,1)	AIP 41; AQ 28; CRC F111; M 15-4; Sz 58, 679
magneton	$J \cdot T^{-1}$	magnetic moment	magnetic moment	(-1,2,0,1)	CRC F111, F115
magnifying power	1	ratio	number	(0,0,0,0)	CRC F112
mass	kg	mass	mass	(0,0,1,0)	AIP 39; CRC F112, F282; M 1-18, 3-52; MH 2415
mass attenuation coefficient	$m^2 \cdot kg^{-1}$	mass attenuation	specific area	(0,2,-1,0)	AIP 45; CRC F360; Sz 59
mass capacity	$m^3 \cdot kg^{-1}$	mass capacity	specific volume	(0,3,-1,0)	CRC F363, F365
mass conductivity	$m^2 \cdot S \cdot kg^{-1}$	conductivity per density	mass conductivity	(1,0,-2,2)	CRC F87
mass decrement	kg	binding energy	mass	(0,0,1,0)	CRC F112
mass defect	kg	binding energy	mass	(0,0,1,0)	CRC F112
mass density	$kg \cdot m^{-3}$	density	density	(0,-3,1,0)	AIP 45
mass energy absorption coefficient	$m^2 \cdot kg^{-1}$	mass attenuation	specific area	(0,2,-1,0)	CRC F360
mass energy transfer coefficient	$m^2 \cdot kg^{-1}$	mass energy transfer	specific area	(0,2,-1,0)	CRC F360
mass flow	$kg \cdot s^{-1}$	mass flow	mass flow rate	(-1,0,1,0)	AIP 39; CRC F363, F365, F379; M 3-52
mass flux	$kg \cdot s^{-1}$	mass flow	mass flow rate	(-1,0,1,0)	CRC F363, F365, F379
mass flux density	$kg \cdot m^{-2} \cdot s^{-1}$	mass flux density	mass flux density	(-1,-2,1,0)	CRC F363, F365, F379
mass fraction	1	ratio	number	(0,0,0,0)	AIP 40; Sz 685
mass number	1	quantity	number	(0,0,0,0)	AIP 40; CRC F112

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
mass stopping power	$\text{J}\cdot\text{m}^2\cdot\text{kg}^{-1}$	mass stopping power	mass stopping power	(-2,4,0,0)	CRC F360
mass transfer coefficient (1)	$\text{kg}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	mass flux density	mass flux density	(-1,-2,1,0)	CRC F363
mass transfer coefficient (2)	$\text{m}\cdot\text{s}^{-1}$	mass transfer	linear velocity	(-1,1,0,0)	CRC F363, F379
mass transfer potential	$\text{kg}\cdot\text{m}^{-3}$	concentration	density	(0,-3,1,0)	CRC F364
mass velocity	$\text{kg}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	mass flux density	mass flux density	(-1,-2,1,0)	CRC F363
material permeance	$\text{kg}\cdot\text{m}^{-2}\cdot\text{s}^{-1}\cdot\text{Pa}^{-1}$	material permeance	mechanical permeability	(1,-1,0,0)	Sz 57, 679
maxwell	Wb	magnetic flux	magnetic flux	(-1,2,1,-1)	CRC F112, F284, F340, F353
mean free path	m	distance	distance	(0,1,0,0)	AIP 39; CRC F364; Sz 59, 687
mean life	s	time	time	(1,0,0,0)	AIP 46
mechanical impedance	$\text{N}\cdot\text{s}\cdot\text{m}^{-1}$	mechanical impedance	mass flow rate	(-1,0,1,0)	Sz 58, 683
melting point	K	temperature	energy	(-2,2,1,0)	CRC B210, B455, C31, C671
meter	m	distance	distance	(0,1,0,0)	CRC F112, F282, F353; M 1-18; MH 2415
meter-candle	lx	received luminous power density	energy flux density	(-3,0,1,0)	CRC F354
mho	S	conductance	conductance	(1,-2,-1,2)	CRC F113, F313, F354
micron	m	distance	distance	(0,1,0,0)	CRC F113, F354
mil	m	distance	distance	(0,1,0,0)	CRC F354
mile	m	distance	distance	(0,1,0,0)	CRC F354; M1-16; MH 2417
millimeter of mercury	Pa	pressure	pressure	(-2,-1,1,0)	CRC F285, F354

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
millimeter of water	Pa	pressure	pressure	(-2,-1,1,0)	CRC F354
miner's inch	$\text{m}^3 \cdot \text{s}^{-1}$	volume flow	volume rate flow	(-1,3,0,0)	M 1-16
minim (1)	s	time	time	(1,0,0,0)	M 1-16
minim (2)	m^3	volume	volume	(0,3,0,0)	CRC F354
minute (1)	rad	plane angle	number	(0,0,0,0)	CRC F113, F284, F354; M 1-17
minute (2)	s	time	time	(1,0,0,0)	CRC F284, F354
mobility	$\text{m}^2 \cdot \text{V}^{-1} \cdot \text{s}^{-1}$	mobility	mobility	(1,0,-1,1)	CRC E110, E114
mobility ratio	1	ratio	number	(0,0,0,0)	AIP 38
modulus of elasticity	Pa	stress	pressure	(-2,-1,1,0)	CRC F113, F363; M 3-52; Sz 676
modulus of rigidity	Pa	stress	pressure	(-2,-1,1,0)	CRC F64, F94
modulus of shear	Pa	stress	pressure	(-2,-1,1,0)	Sz 57, 676
mohs	Pa	hardness	pressure	(-2,-1,1,0)	CRC E106
moisture content	1	ratio	number	(0,0,0,0)	CRC F363
molal reaction rate	$\text{kg} \cdot \text{m}^{-3} \cdot \text{s}^{-1}$	molal reaction rate	molal reaction rate	(-1,-3,1,0)	CRC F363, F366, F379
molality	$\text{mol} \cdot \text{kg}^{-1}$	mass concentration	mass concentration	(0,0,-1,0)	AIP 39; CRC F113; Sz 59, 684
molar conductance	$\text{m}^2 \cdot \text{S} \cdot \text{mol}^{-1}$	molar conductivity	molar conductivity	(1,0,-1,2)	CRC F113
molar conductivity	$\text{m}^2 \cdot \text{S} \cdot \text{mol}^{-1}$	molar conductivity	molar conductivity	(1,0,-1,2)	CRC F87, CRC F113
molar energy	$\text{J} \cdot \text{mol}^{-1}$	molar energy	energy	(-2,2,1,0)	CRC F302; Sz 59, 684
molar entropy	$\text{J} \cdot \text{mol}^{-1} \cdot \text{K}^{-1}$	ratio	number	(0,0,0,0)	CRC F283; Sz 59, 684
molar fraction	1	ratio	number	(0,0,0,0)	AIP 40
molar heat capacity	$\text{J} \cdot \text{mol}^{-1} \cdot \text{K}^{-1}$	ratio	number	(0,0,0,0)	CRC F102, F283, F302; Sz 59, 684

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
molar heat of dilution	$\text{J}\cdot\text{mol}^{-1}$	molar heat	energy	(-2,2,1,0)	CRC D121
molar heat of formation	$\text{J}\cdot\text{mol}^{-1}$	molar heat	energy	(-2,2,1,0)	CRC E110, F64
molar heat of fusion	$\text{J}\cdot\text{mol}^{-1}$	molar heat	energy	(-2,2,1,0)	CRC B211, C666, C671, F65, F70
molar heat of sublimation	$\text{J}\cdot\text{mol}^{-1}$	molar heat	energy	(-2,2,1,0)	CRC B211
molar heat of transformation	$\text{J}\cdot\text{mol}^{-1}$	molar heat	energy	(-2,2,1,0)	CRC B211
molar heat of transition	$\text{J}\cdot\text{mol}^{-1}$	molar heat	energy	(-2,2,1,0)	CRC D46
molar heat of vaporization	$\text{J}\cdot\text{mol}^{-1}$	molar heat	energy	(-2,2,1,0)	CRC F65, F70
molar mass	$\text{kg}\cdot\text{mol}^{-1}$	molar mass	mass	(0,0,1,0)	AIP 42; CRC F302; Sz 59, 683
molar ratio	1	ratio	number	(0,0,0,0)	AIP 40
molar reaction rate	$\text{mol}\cdot\text{m}^{-3}\cdot\text{s}^{-1}$	molar reaction rate	molar reaction rate	(-1,-3,0,0)	CRC F288-9
molar volume	$\text{m}^3\cdot\text{mol}^{-1}$	molar volume	volume	(0,3,0,0)	CRC F113, F302; Sz 59, 684
molarity	$\text{mol}\cdot\text{m}^{-3}$	volume concentration	volume number density	(0,-3,0,0)	CRC F113
mole	mol	quantity	number	(0,0,0,0)	CRC F113, F282; M 1-18; MH 2415
mole fraction	1	ratio	number	(0,0,0,0)	CRC F113, F379; Sz 685
molecular diffusivity	$\text{m}^2\cdot\text{s}^{-1}$	diffusion rate	kinematic viscosity	(-1,2,0,0)	CRC F363
molecular energy	$\text{J}\cdot\text{mol}^{-1}$	molar energy	energy	(-2,2,1,0)	CRC D50
molecular weight	kg	mass	mass	(0,0,1,0)	CRC F113
moment of couple	$\text{N}\cdot\text{m}$	torque	energy	(-2,2,1,0)	AIP 43; CRC F88

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
moment of force	N·m	torque	energy	(-2,2,1,0)	CRC F113; M 3-4; Sz 57
moment of inertia	kg·m ²	angular inertia	angular inertia	(0,2,1,0)	AIP 41; CRC F114; M 3-52; Sz 57, 673
moment of momentum	J·s	angular momentum	angular momentum	(-1,2,1,0)	CRC F77; Sz 57, 674
moment of section	m ⁻⁴	moment of section	moment of section	(0,4,0,0)	M 1-21; MH 2421
momentum	kg·m·s ⁻¹	momentum	momentum	(-1,1,1,0)	AIP 39; CRC F114; M 3-52; Sz 57, 673
monochromatic emissive power	1	ratio	number	(0,0,0,0)	CRC F114
month	s	time	time	(1,0,0,0)	CRC F354
mpg	m ⁻²	fuel efficiency	area number density	(0,-2,0,0)	CRC F354
mph	m·s ⁻¹	speed	linear velocity	(-1,1,0,0)	CRC F354
mutual inductance	H	inductance	inductance	(0,2,1,-2)	AIP 42; M 15-3
n-unit	1	ratio	number	(0,0,0,0)	CRC F121
nail	m	distance	distance	(0,1,0,0)	CRC F354
nautical mile	m	distance	distance	(0,1,0,0)	M1-16; Sz 60, 689
neel temperature	K	temperature	energy	(-2,2,1,0)	AIP 43; CRC F114
neper	Np	acoustic loudness	number	(0,0,0,0)	CRC F354
neutron number	1	quantity	number	(0,0,0,0)	AIP 42; CRC F114
newton	N	force	force	(-2,1,1,0)	CRC F114, F134, F283, F313, F354; M1-18, 3-52; MH 2415
nit	cd·m ⁻²	emitted luminous power density	energy density flux	(-3,0,1,0)	CRC E210, F355
noggin	m ³	volume	volume	(0,3,0,0)	CRC F355
normal	m ⁻³	volume concentration	volume number density	(0,-3,0,0)	CRC F115

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
normal stress	Pa	stress	pressure	(-2,-1,1,0)	AIP 46
nox	lx	received luminous power density	energy flux density	(-3,0,1,0)	CRC F355
nuclear magneton	$J \cdot T^{-1}$	magnetic moment	magnetic moment	(-1,2,0,1)	CRC B228, E82
nuclear mass	kg	mass	mass	(0,0,1,0)	AIP 39
nuclear spin quantum number	1	quantum number	number	(0,0,0,0)	AIP 42
nucleon number	1	quantity	number	(0,0,0,0)	AIP 40; CRC F115
number density of particles	m^{-3}	volume number density	volume number density	(0,-3,0,0)	AIP 39
numerical aperture	1	resolving power	number	(0,0,0,0)	CRC F115
nusselt number	1	ratio	number	(0,0,0,0)	CRC F115
oersted	$A \cdot m^{-1}$	magnetic strength	magnetic field	(-1,-1,0,1)	CRC F111, F115, F284, F340, F355; M 1-23
ohm	Ω	resistance	resistance	(-1,2,1,-2)	CRC F116, F134, F283, F313; M 1-18
orbital angular momentum quantum number	1	quantum number	number	(0,0,0,0)	AIP 39
order of reflection	1	quantity	number	(0,0,0,0)	AIP 39
osmolality	$mol \cdot kg^{-1}$	mass concentration	mass concentration	(0,0,-1,0)	CRC D271
osmosity	$mol \cdot m^{-3}$	molar concentration	volume number density	(0,-3,0,0)	CRC D271
osmotic coefficient	1	ratio	number	(0,0,0,0)	CRC F294
osmotic pressure	Pa	pressure	pressure	(-2,-1,1,0)	AIP 46
ounce (1)	m^3	volume	volume	(0,3,0,0)	CRC F355; M 1-16

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
ounce (2)	kg	mass	mass	(0,0,1,0)	CRC F355; M 1-17; MH 2419
overpotential	V	electric potential	electric potential	(-2,2,1,-1)	CRC F117
pace	m	distance	distance	(0,1,0,0)	CRC F355
packing fraction	1	ratio	number	(0,0,0,0)	CRC F117
palm	m	distance	distance	(0,1,0,0)	CRC F355
parallax	rad	plane angle	number	(0,0,0,0)	CRC F117
parsec	m	distance	distance	(0,1,0,0)	CRC F117, F355; M 1-23
partial pressure	Pa	pressure	pressure	(-2,-1,1,0)	CRC F117, F291, F292
particle displacement	m	distance	distance	(0,1,0,0)	AIP 45
particle fluence	m^{-2}	particles per area	area number density	(0,-2,0,0)	Sz 59, 688
particle fluence rate	$m^{-2}\cdot s^{-1}$	particle rate fluence	particle density flux	(-1,-2,0,0)	AIP 46; Sz 59, 688
particle flux density	$m^{-2}\cdot s^{-1}$	particle rate fluence	particle density flux	(-1,-2,0,0)	AIP 46; Sz 59, 688
pascal	Pa	pressure	pressure	(-2,-1,1,0)	CRC F117, F134, F283, F313, F355, F360; M 1-18; MH 2416
pascal-second	Pa·s	dynamic viscosity	dynamic viscosity	(-1,-1,1,0)	CRC F355
path length	m	distance	distance	(0,1,0,0)	AIP 40
peck	m^3	volume	volume	(0,3,0,0)	CRC F355; M 1-16
peltier coefficient	V	heat flow per unit charge	electric potential	(-2,2,1,-1)	AIP 46
pennyweight	kg	mass	mass	(0,0,1,0)	CRC F355; M 1-17
perch (1)	m	distance	distance	(0,1,0,0)	CRC F355; M 1-16
perch (2)	m^3	volume	volume	(0,3,0,0)	M 1-16

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference	
period	s	time	time	(1,0,0,0)	AIP 43; CRC F118; M 15-3	
perm	$\text{kg}\cdot\text{m}^{-2}\cdot\text{s}^{-1}\cdot\text{Pa}^{-1}$	mechanical permeability	mechanical permeability	(1,-1,0,0)	M 1-23	
perm-inch	$\text{kg}\cdot\text{m}^{-1}\cdot\text{s}^{-1}\cdot\text{Pa}^{-1}$	mechanical permeance	time	(1,0,0,0)	M 1-23	
permeability (1)	$\text{H}\cdot\text{m}^{-1}$	magnetic permeability	magnetic permeability	(0,1,1,-2)	AIP 45; CRC F215; M 15-4; Sz 58, 681	
permeability (2)	m^2	hydrodynamic permeability	area	(0,2,0,0)	CRC F364	
permeance	H	magnetic permeance	inductance	(0,2,1,-2)	AQ 28; M 15-4	
permittivity	$\text{F}\cdot\text{m}^{-1}$	permittivity	permittivity	(2,-3,-1,2)	AIP 44; CRC F215; M 15-3; Sz 58, 678	
phase angle	rad	plane angle	number	(0,0,0,0)	CRC F118	
phase difference	rad	plane angle	number	(0,0,0,0)	AIP 46	
phot	lx	received luminous power density	energy density	flux	(-3,0,1,0)	CRC E210, F104, F118, F341, F355; M 1-23
pica	m	distance	distance	(0,1,0,0)	CRC F355; M 1-23	
pint	m^3	volume	volume	(0,3,0,0)	CRC F355; M 1-16	
plane angle	rad	plane angle	number	(0,0,0,0)	AIP 44; CRC F283, F313; M 1-18	
point	m	distance	distance	(0,1,0,0)	CRC F356; M 1-24	
poise	Pa·s	dynamic viscosity	dynamic viscosity	vis-	(-1,-1,1,0)	CRC F37, F38, F118, F284, F339, F356; M 1-24; MH 2423
poisson ratio	1	ratio	number	(0,0,0,0)	AIP 45; CRC F64	
polarizability	m^3	polarizability	volume	(0,3,0,0)	CRC E70, E72, E74	
polarization	$\text{C}\cdot\text{m}^{-2}$	electric polarization	electric density	flux	(0,-2,0,1)	AIP 43; AQ 28
pole	m	distance	distance	(0,1,0,0)	CRC F356; M 1-16	

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
pole strength	$A \cdot n \cdot m$	magnetic strength pole	pole strength	$(-1,1,0,1)$	M 15-4
pond	N	force	force	$(-2,1,1,0)$	CRC F356; MH 2420
pop	$m \cdot s^{-6}$	change in crackle	linear pop	$(-6,1,0,0)$	Sprott, Visser
porosity	1	ratio	number	$(0,0,0,0)$	CRC F363
position vector	m	distance	distance	$(0,1,0,0)$	AIP 40
potential difference	V	electric potential	electric potential	$(-2,2,1,-1)$	AIP 43; CRC F134, F313
potential energy	J	energy	energy	$(-2,2,1,0)$	AIP 41
pottle	m^3	volume	volume	$(0,3,0,0)$	CRC F356
pound	kg	mass	mass	$(0,0,1,0)$	CRC F284, F356; M 1-17; MH 2420
poundal	N	force	force	$(-2,1,1,0)$	M 1-24; MH 2420
power	W	power	power	$(-3,2,1,0)$	AIP 43; CRC F119, F134, F283, F313, F360, F364; M 1-18, 3-52; MH 2415
poynting vector	$J \cdot m^{-2} \cdot s^{-1}$	directional energy flux	energy flux density	$(-3,0,1,0)$	AIP 77
poynting vector per c squared	$s^2 \cdot W \cdot m^{-4}$	electromagnetic momentum density	mass flux density	$(-1,-2,1,0)$	AIP 77
ppm	1	ratio	number	$(0,0,0,0)$	CRC F355
pressure	Pa	pressure	pressure	$(-2,-1,1,0)$	AIP 39; CRC F119, F134, F283, F313, F360, F363; M 1-18, 3-52; MH 2416
pressure drop	Pa·s	pressure drop	dynamic viscosity	$(-1,-1,1,0)$	CRC F366
pressure gradient	$Pa \cdot m^{-1}$	pressure gradient	pressure gradient	$(-2,-2,1,0)$	CRC F366
principal quantum number	1	quantum number	number	$(0,0,0,0)$	AIP 39
propagation vector	m^{-1}	wave number	linear number density	$(0,-1,0,0)$	AIP 39

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference	
psi	Pa	pressure	pressure	(-2,-1,1,0)	CRC F356	
pulse	$\text{m}\cdot\text{s}^{-3}$	Change in acceleration	linear jerk	(-3,1,0,0)	Visser	
puncheon	m^3	volume	volume	(0,3,0,0)	CRC F356	
pyron	$\text{J}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	heat flow	energy density	flux	(-3,0,1,0)	CRC F120
quadrant	rad	plane angle	number	(0,0,0,0)	CRC F356; M 1-17	
quadrupole moment	$\text{C}\cdot\text{m}^2$	electric quadrupole moment	quadrupole moment	(0,2,0,1)	AIP 43*	
quantity of electricity	C	electric charge	electric charge	(0,0,0,1)	AIP 43; CRC F134, F215, F283, F313; M 1-18, 15-3	
quantity of heat	J	energy	energy	(-2,2,1,0)	AIP 43; CRC F134, F315; M 1-18	
quantity of light	$\text{lm}\cdot\text{s}$	luminous energy	energy	(-2,2,1,0)	AIP 43; CRC E210	
quantity of magnetism	Wb	magnetic flux	magnetic flux	(-1,2,1,-1)	CRC F111	
quantum	J	energy	energy	(-2,2,1,0)	CRC F120	
quart	m^3	volume	volume	(0,3,0,0)	CRC F356; M 1-16	
quarter (1)	m^3	volume	volume	(0,3,0,0)	CRC F357	
quarter (2)	kg	mass	mass	(0,0,1,0)	CRC F357; M 1-17	
quintal	kg	mass	mass	(0,0,1,0)	CRC F357	
rad	Gy	absorbed dose	specific energy	(-2,2,0,0)	CRC F120, F284, F357, F360, F361; M 1-24; Sz 62, 692	
radian	rad	plane angle	number	(0,0,0,0)	CRC F120, F283, F357; M 1-18	
radiance	$\text{W}\cdot\text{m}^{-2}\cdot\text{sr}^{-1}$	power per area and solid angle	energy density	flux	(-3,0,1,0)	CRC E209; Sz 58, 681
radiant density	$\text{J}\cdot\text{m}^{-3}$	energy density	pressure	(-2,-1,1,0)	CRC E209	
radiant emittance	$\text{W}\cdot\text{m}^{-2}$	power per area	energy density	flux	(-3,0,1,0)	CRC E209

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
radiant energy	J	energy	energy	(-2,2,1,0)	CRC E209; Sz 58, 681
radiant energy fluence rate	$W \cdot m^{-2}$	fluence rate	energy density	flux (-3,0,1,0)	AIP 46
radiant exci- tance	$W \cdot m^{-2}$	power per area	energy density	flux (-3,0,1,0)	CRC E209, F97
radiant exposure	$J \cdot m^{-2}$	radiant exposure	surface tension	(-2,0,1,0)	Sz 59, 687
radiant flux	W	power	power	(-3,2,1,0)	CRC E209, F134; Sz 58, 681
radiant flux den- sity	$W \cdot m^{-2}$	power per area	energy density	flux (-3,0,1,0)	CRC E209
radiant intensity	$W \cdot sr^{-1}$	power per solid an- gle	power	(-3,2,1,0)	CRC E209; M 1-18
radiant power	W	power	power	(-3,2,1,0)	Sz 58, 681
radiation chemi- cal yield	$mol \cdot J^{-1}$	yield per energy	thermal expan- sion	(2,-2,-1,0)	CRC F360
radiation dose equivalent	Sv	dose equivalent	specific energy	(-2,2,0,0)	CRC F124
radioactivity	Bq	radioactivity	angular veloc- ity	(-1,0,0,0)	AIP 40; CRC F134, F283, F314, F360; M 1-18
radius	m	distance	distance	(0,1,0,0)	AIP 40
radius of gyra- tion	m	distance	distance	(0,1,0,0)	CRC F121
range	m	distance	distance	(0,1,0,0)	AIP 43
rate of rotation	Hz	frequency	angular veloc- ity	(-1,0,0,0)	CRC F363
rate of shear	s^{-1}	rate	angular veloc- ity	(-1,0,0,0)	CRC F364
rate-of-strain tensor	s^{-2}	strain rate	angular accel- eration	(-2,0,0,0)	CRC F378
rayleigh number	1	ratio	number	(0,0,0,0)	CRC F121
reactance	Ω	<i>i resistance</i>	resistance	(-1,2,1,-2)	Sz 58, 678
reaction energy	J	energy	energy	(-2,2,1,0)	AIP 43

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
reactive power	W	i power	power	(-3,2,1,0)	M 15-3
reciprocal lattice vector	m^{-1}	reciprocal length	linear number density	(0,-1,0,0)	AIP 41
recombination coefficient	$m^3 \cdot s^{-1}$	recombination	volume flow rate	(-1,3,0,0)	AIP 44
reduced mass	kg	mass	mass	(0,0,1,0)	AIP 39
reduction potential	V	electric potential	electric potential	(-2,2,1,-1)	CRC D159
redwood second	$m^2 \cdot s^{-1}$	kinematic viscosity	kinematic viscosity	(-1,2,0,0)	CRC F38
reflectance	1	ratio	number	(0,0,0,0)	CRC E210
reflection coefficient	1	ratio	number	(0,0,0,0)	CRC F121
reflectivity	1	ratio	number	(0,0,0,0)	CRC F121
refractive index	1	ratio	number	(0,0,0,0)	AIP 39; CRC F105
refractivity	1	ratio	number	(0,0,0,0)	CRC F105, F121
register ton	m^3	volume	volume	(0,3,0,0)	CRC F357; M 1-17
relative activity	1	chemical activity	number	(0,0,0,0)	CRC F292
relative atomic mass	1	ratio	number	(0,0,0,0)	AIP 40
relative chemical activity	1	chemical activity	number	(0,0,0,0)	AIP 37
relative density	1	ratio	number	(0,0,0,0)	AIP 38
relative elongation	1	ratio	number	(0,0,0,0)	CRC F317
relative humidity	1	ratio	number	(0,0,0,0)	CRC F122
relative molar mass	mol	ratio	number	(0,0,0,0)	AIP 42
relative molecular mass	1	ratio	number	(0,0,0,0)	AIP 42

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
relative permeability	1	ratio	number	(0,0,0,0)	AIP 45
relative permittivity	1	ratio	number	(0,0,0,0)	AIP 42
relaxation time	s	time	time	(1,0,0,0)	AIP 46; CRC F364
reluctance	H^{-1}	reluctance	reluctance	(0,-2,-1,2)	AQ 28; CRC F122; M 15-4; Sz 58, 679
reluctivity	$m \cdot H^{-1}$	reluctivity	reluctivity	(0,-1,-1,2)	CRC F122; M 15-4
rem	Sv	dose equivalent	specific energy	(-2,2,0,0)	CRC F122, F123, F357, F360, F361; M 1-24; Sz 62, 692
rep	Gy	absorbed dose	specific energy	(-2,2,0,0)	CRC F123
resistance	Ω	resistance	resistance	(-1,2,1,-2)	AQ 28; CRC F122, F313; M 15-3
resistivity	$\Omega \cdot m$	resistivity	resistivity	(-1,3,1,-2)	CRC B206, E95, F122; M 15-3; Sz 58, 678
revolution	rad	plane angle	number	(0,0,0,0)	CRC F357
reyn	Pa·s	dynamic viscosity	dynamic viscosity	(-1,-1,1,0)	CRC F39, F357
rhe	$s^{-1} \cdot Pa^{-1}$	fluidity	fluidity	(1,1,-1,0)	CRC F98, F357; M 1-24
right angle	rad	plane angle	number	(0,0,0,0)	CRC F357
rigidity coefficient	Pa·s	rigidity	dynamic viscosity	(-1,-1,1,0)	CRC F364
rod	m	distance	distance	(0,1,0,0)	CRC F357; M 1-16; MH 2417
roentgen	$C \cdot kg^{-1}$	exposure	exposure	(0,0,-1,1)	CRC F123, F284, F357, F360; M 1-24; Sz 62, 692
rood	m^2	area	area	(0,2,0,0)	CRC F357
rope	m	distance	distance	(0,1,0,0)	CRC F357
rotary power	$rad \cdot m^{-1}$	plane angle per distance	linear number density	(0,-1,0,0)	CRC E424, F123

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
rotational quantum number	1	quantum number	number	(0,0,0,0)	AIP 42
rpm	rad·s ⁻¹	angular velocity	angular velocity	(-1,0,0,0)	CRC F357
saybolt second	m ² ·s ⁻¹	kinematic viscosity	kinematic viscosity	(-1,2,0,0)	CRC F38
scale height	m	distance	distance	(0,1,0,0)	CRC F123
scattering angle	rad	plane angle	number	(0,0,0,0)	AIP 45
scattering cross section	m ²	cross section	area	(0,2,0,0)	CRC F123
scruple (1)	m ³	volume	volume	(0,3,0,0)	CRC F357
scruple (2)	kg	mass	mass	(0,0,1,0)	CRC F357; M 1-17
seam	m ³	volume	volume	(0,3,0,0)	CRC F357
second (1)	rad	plane angle	number	(0,0,0,0)	CRC F124, F284, F357
second (2)	s	time	time	(1,0,0,0)	CRC F123, F282; M 1-18; MH 2415
second acceleration	m·s ⁻³	Change in acceleration	linear jerk	(-3,1,0,0)	Schot
second hyperpolarizability	C ⁴ ·m ⁴ ·J ⁻³	second hyperpolarizability	second hyperpolarizability	(6,-2,-3,4)	NIST
second hypersusceptibility	C·m·J ⁻²	second hypersusceptibility	second hypersusceptibility	(4,-3,-2,1)	efunda
second moment of area	m ⁴	moment of section	moment of section	(0,4,0,0)	Sz 57, 675
section	m ²	area	area	(0,2,0,0)	M 1-16, 1-24
section modulus	m ³	section modulus	volume	(0,3,0,0)	M 1-22; MH 2421
seebeck coefficient	V·K ⁻¹	thermoelectric power	thermoelectric power	(0,0,0,-1)	AIP 43
self-inductance	H	inductance	inductance	(0,2,1,-2)	AIP 42
shake	s	time	time	(1,0,0,0)	CRC F357; M 1-24
shear modulus	Pa	stress	pressure	(-2,-1,1,0)	AIP 41

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
shear strain	rad	plane angle	number	(0,0,0,0)	AIP 44
shear strength	Pa	stress	pressure	(-2,-1,1,0)	CRC F124
shear stress	Pa	stress	pressure	(-2,-1,1,0)	AIP 46; CRC F364; M 3-52
shock	$\text{m}\cdot\text{s}^{-3}$	Change in acceleration	linear jerk	(-3,1,0,0)	Visser
short ton	kg	mass	mass	(0,0,1,0)	M 1-17
siegbahn	m	distance	distance	(0,1,0,0)	AQ 21
siemens	S	conductance	conductance	(1,-2,-1,2)	CRC F134, F283, F313, F357; M 1-18
sievert	Sv	dose equivalent	specific energy	(-2,2,0,0)	CRC F124, F314
slug	kg	mass	mass	(0,0,1,0)	CRC F357; M 3-52; MH 2420
snap	$\text{m}\cdot\text{s}^{-4}$	change in jerk	linear snap	(-4,1,0,0)	Sprott, Visser
solid angle	sr	solid angle	number	(0,0,0,0)	AIP 46; CRC F125, F283, F313; M 1-18
solubility (1)	$\text{m}^3\cdot\text{kg}^{-1}$	specific volume	specific volume	(0,3,-1,0)	CRC B457
solubility (2)	$\text{kg}\cdot\text{m}^{-3}$	mass solubility	density	(0,-3,1,0)	CRC B68
solubility (3)	1	ratio	number	(0,0,0,0)	CRC C707
solubility (4)	$\text{mol}\cdot\text{m}^{-3}$	molar concentration	volume number density	(0,-3,0,0)	CRC D274
sound energy flux	W	sound power	power	(-3,2,1,0)	Sz 58, 683
sound intensity	$\text{W}\cdot\text{m}^{-2}$	sound intensity	energy density flux	(-3,0,1,0)	M 12-136; Sz 58, 683
sound power	W	power	power	(-3,2,1,0)	Sz 58, 683
sound power level	Np	acoustic loudness	number	(0,0,0,0)	AIP 42
sound pressure	Pa	pressure	pressure	(-2,-1,1,0)	Sz 58, 682
sound pressure level	Np	acoustic loudness	number	(0,0,0,0)	AIP 42; M 12-136; Sz 58, 682
span	m	distance	distance	(0,1,0,0)	CRC F357; M 1-16

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
spasm	$\text{m}\cdot\text{s}^{-4}$	change in jerk	linear snap	(-4,1,0,0)	Sprott
specific activity	$\text{Bq}\cdot\text{kg}^{-1}$	specific activity	specific activity	(-1,0,-1,0)	AIP 37
specific conductance	$\text{S}\cdot\text{m}^{-1}$	conductivity	conductivity	(1,-3,-1,2)	CRC D271, F125
specific energy	$\text{J}\cdot\text{kg}^{-1}$	specific energy	specific energy	(-2,2,0,0)	AIP 38; CRC F134, F302, F360; Sz 57, 672
specific enthalpy	$\text{J}\cdot\text{kg}^{-1}$	specific enthalpy	specific energy	(-2,2,0,0)	Sz 57, 677
specific entropy	kg^{-1}	per mass	mass concentration	(0,0,-1,0)	Sz 57, 674
specific gravity	1	ratio	number	(0,0,0,0)	CRC F125, F364
specific heat (1)	$\text{J}\cdot\text{kg}^{-1}$	specific heat (a)	specific energy	(-2,2,0,0)	CRC F64
specific heat (2)	1	ratio	number	(0,0,0,0)	CRC F125
specific heat (3)	$\text{J}\cdot\text{kg}^{-1}\cdot\text{K}^{-1}$	specific heat (b)	mass concentration	(0,0,-1,0)	CRC D174, D180, D181, E106, F10, F363
specific heat capacity	$\text{J}\cdot\text{kg}^{-1}\cdot\text{K}^{-1}$	specific heat capacity	mass concentration	(0,0,-1,0)	AIP 38; CRC B205, E16, F64, F102, F302; M 1-18
specific heat of electricity	$\text{J}\cdot\text{C}^{-1}\cdot\text{K}^{-1}$	specific heat of electricity	thermoelectric power	(0,0,0,-1)	CRC F129 (vector)
specific heat of fusion	$\text{J}\cdot\text{kg}^{-1}$	specific heat (a)	specific energy	(-2,2,0,0)	CRC B455, C666, C671, D187
specific heat of vaporization	$\text{J}\cdot\text{kg}^{-1}$	specific heat (a)	specific energy	(-2,2,0,0)	CRC B455, F64
specific inductive capacity	1	ratio	number	(0,0,0,0)	CRC F126
specific mass content	1	ratio	number	(0,0,0,0)	CRC F363
specific molar heat capacity	$\text{J}\cdot\text{kg}^{-1}\cdot\text{mol}^{-1}\cdot\text{K}^{-1}$	molar specific heat	mass concentration	(0,0,-1,0)	CRC D175, F363
specific molar heat of combustion	$\text{J}\cdot\text{kg}^{-1}\cdot\text{mol}^{-1}$	specific molar heat	specific energy	(-2,2,0,0)	CRC D282

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
specific molar heat of formation	$\text{J}\cdot\text{kg}^{-1}\cdot\text{mol}^{-1}$	specific molar heat	specific energy	(-2,2,0,0)	CRC D282
specific molar heat of transition	$\text{J}\cdot\text{kg}^{-1}\cdot\text{mol}^{-1}$	specific molar heat	specific energy	(-2,2,0,0)	CRC D43
specific rotation (1)	$\text{rad}\cdot\text{m}^2\cdot\text{kg}^{-1}$	polarization rotation	specific area	(0,2,-1,0)	CRC C705, F126
specific rotation (2)	$\text{rad}\cdot\text{m}^{-1}$	plane angle per distance	linear number density	(0,-1,0,0)	CRC E424
specific vapor capacity	Pa^{-1}	specific vapor capacity	compressibility	(2,1,-1,0)	CRC F363
specific volume	$\text{m}^3\cdot\text{kg}^{-1}$	specific volume	specific volume	(0,3,-1,0)	CRC F126, F302; M 3-52
specific weight	$\text{N}\cdot\text{m}^{-3}$	force per volume	pressure gradient	(-2,-2,1,0)	M 3-52
speed	$\text{m}\cdot\text{s}^{-1}$	speed	linear velocity	(-1,1,0,0)	AIP 38; CRC F126
sphere	sr	solid angle	number	(0,0,0,0)	CRC F357
spin	J·s	angular momentum	angular momentum	(-1,2,1,0)	CRC B228, F126
spin quantum number	1	quantum number	number	(0,0,0,0)	AIP 40
spontaneous-ignition temperature	K	temperature	energy	(-2,2,1,0)	CRC F126
sprite	$\text{m}\cdot\text{s}^{-4}$	change in jerk	linear snap	(-4,1,0,0)	Sprott
square chain	m^2	area	area	(0,2,0,0)	CRC F357
square degree	sr	solid angle	number	(0,0,0,0)	CRC F357
square foot	m^2	area	area	(0,2,0,0)	CRC F357
square inch	m^2	area	area	(0,2,0,0)	CRC F357
square link	m^2	area	area	(0,2,0,0)	CRC F357
square meter	m^2	area	area	(0,2,0,0)	CRC F357
square mile	m^2	area	area	(0,2,0,0)	CRC F357

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference	
square perch	m ²	area	area	(0,2,0,0)	M 1-16	
square rod	m ²	area	area	(0,2,0,0)	CRC F357	
square yard	m ²	area	area	(0,2,0,0)	CRC F357	
stagnation pressure	Pa	pressure	pressure	(-2,-1,1,0)	CRC F126	
standard	m ³	volume	volume	(0,3,0,0)	CRC F358	
standard entropy	J·mol ⁻¹ ·K ⁻¹	ratio	number	(0,0,0,0)	CRC B211	
static pressure	Pa	pressure	pressure	(-2,-1,1,0)	CRC F126	
statute mile	m	distance	distance	(0,1,0,0)	CRC F126	
steradian	sr	solid angle	number	(0,0,0,0)	CRC F126, F283, F313, F358; M 1-18	
stere	m ³	volume	volume	(0,3,0,0)	CRC F358; M 1-24; Sz 61, 690	
stilb	cd·m ⁻²	emitted luminous power density	energy density	flux	(-3,0,1,0)	CRC E210, F341, F358; M 1-24
stoichiometric number of substance	1	quantity	number	(0,0,0,0)	AIP 45	
stoke	m ² ·s ⁻¹	kinematic viscosity	kinematic viscosity	viscosity	(-1,2,0,0)	CRC F37, F38, F126, F284, F339, F358; M 1-24; MH 2423
stone	kg	mass	mass	(0,0,1,0)	CRC F358; M 1-17	
stopping power	J·m ⁻¹	stopping power	force	(-2,1,1,0)	AIP 43	
strain	1	ratio	number	(0,0,0,0)	CRC F127	
strain tensor	1	ratio	number	(0,0,0,0)	AIP 44	
stress	Pa	stress	pressure	(-2,-1,1,0)	CRC F127, F134, F283; M 1-18	
super-acceleration	m·s ⁻³	Change in acceleration	linear jerk	(-3,1,0,0)	Visser	

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
superconductor critical field strength	$A \cdot n \cdot m^{-1}$	current-turn per distance	magnetic field	(-1,-1,0,1)	AIP 41
superconductor critical transition temperature	K	temperature	energy	(-2,2,1,0)	AIP 43
superconductor energy gap	J	energy	energy	(-2,2,1,0)	AIP 46
surface charge density	$C \cdot m^{-2}$	charge per area	electric flux density	(0,-2,0,1)	AIP 46; CRC F127, F303; Sz 58, 677
surface concentration	$kg \cdot m^{-2}$	surface concentration	area density	(0,-2,1,0)	CRC F365
surface current density	$A \cdot m^{-2}$	surface current density	surface current density	(-1,-2,0,1)	Sz 58, 677
surface diffusivity	$kg \cdot m \cdot s^{-2}$	surface diffusivity	force	(-2,1,1,0)	CRC F364
surface emissivity	1	ratio	number	(0,0,0,0)	CRC F363
surface magnetic density	T	magnetic flux density	magnetic flux density	(-1,0,1,-1)	CRC F127
surface tension	$N \cdot m^{-1}$	surface tension	surface tension	(-2,0,1,0)	AIP 44; CRC B214, F33, F34, F64, F127, F364; M 3-52; MH 2416; Sz 57, 675
surface viscosity	$kg \cdot s^{-1}$	surface viscosity	mass flow rate	(-1,0,1,0)	CRC F365, F378
surge (1)	$m \cdot s^{-3}$	Change in acceleration	linear jerk	(-3,1,0,0)	Visser
surge (2)	$m \cdot s^{-4}$	change in jerk	linear snap	(-4,1,0,0)	Sprott
susceptance	S	<i>i conductance</i>	conductance	(1,-2,-1,2)	AIP 41; M 15-3; Sz 58, 680
tablespoon	m^3	volume	volume	(0,3,0,0)	CRC F358
talbot	lm-s	luminous energy	energy	(-2,2,1,0)	AQ 25; CRC E210
teaspoon	m^3	volume	volume	(0,3,0,0)	CRC F358

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
temperature	K	temperature	energy	(-2,2,1,0)	AIP 40; CRC F127, F282; M 1-18; MH 2415
temperature conductivity	$m^2 \cdot s^{-1}$	diffusion rate	kinematic viscosity	(-1,2,0,0)	CRC F363, F377
tensile strength	Pa	stress	pressure	(-2,-1,1,0)	CRC B214
tesla	T	magnetic flux density	magnetic flux density	(-1,0,1,-1)	CRC F134, F283, F358; M 1-18; MH 2416
tex	$kg \cdot m^{-1}$	linear density	linear density	(0,-1,1,0)	CRC F358; Sz 60, 689
therm	J	energy	energy	(-2,2,1,0)	CRC F358
thermal capacity	kg^{-1}	per mass	mass concentration	(0,0,-1,0)	CRC D173, F102, F128
thermal conductivity	$W \cdot m^{-1} \cdot K^{-1}$	thermal conductivity	thermal conductivity	(-1,-1,0,0)	AIP 45; CRC B213, B456, D186, D187, E2, E3, E4, E5, E7, E10, E11, E12, E13, E16, E25, E32, E34, E106, F10, F61, F63, F64, F65, F364, F377; M 1-18; MH 2416; Sz 57, 675
thermal diffusion coefficient	$m^2 \cdot s^{-1}$	diffusion rate	kinematic viscosity	(-1,2,0,0)	AIP 41
thermal diffusion factor	1	ratio	number	(0,0,0,0)	AIP 44
thermal diffusion ratio	1	ratio	number	(0,0,0,0)	AIP 38
thermal diffusivity	$m^2 \cdot s^{-1}$	diffusion rate	kinematic viscosity	(-1,2,0,0)	AIP 37; CRC F363, F377
thermal expansion coefficient	K^{-1}	thermal expansion	thermal expansion	(2,-2,-1,0)	CRC B213, E106, F64, F128
thermal resistance	$K \cdot W^{-1}$	thermal resistance	time	(1,0,0,0)	AIP 43
thermal resistivity	$m \cdot K \cdot s \cdot J^{-1}$	thermal resistivity	thermal resistivity	(1,1,0,0)	Sz 57, 675

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
thermionic current density	$A \cdot m^{-2}$	surface ion emission	surface current density	(-1,-2,0,1)	CRC F128
thermodynamic energy	J	heat	energy	(-2,2,1,0)	AIP 43
thermoelectric power	$V \cdot K^{-1}$	thermoelectric power	thermoelectric power	(0,0,0,-1)	CRC F128
thermoelectromotive force	V	power per current	electric potential	(-2,2,1,-1)	AIP 41
thermogradient coefficient	K^{-1}	thermal expansion	thermal expansion	(2,-2,-1,0)	CRC F364, F366
thickness	m	distance	distance	(0,1,0,0)	AIP 38
thou	m	distance	distance	(0,1,0,0)	CRC F358
time	s	time	time	(1,0,0,0)	AIP 40; CRC F129, F282, F310, F363; M 1-18, 3-52; MH 2415; Sz 46
time constant	s	time	time	(1,0,0,0)	M 15-3
ton (1)	m^3	volume	volume	(0,3,0,0)	M 1-24
ton (2)	kg	mass	mass	(0,0,1,0)	CRC F358; M 1-24; MH 2420
ton (3)	J	energy	energy	(-2,2,1,0)	M 1-24
tonne	kg	mass	mass	(0,0,1,0)	CRC F113, F284, F358; MH 2420
torque	$N \cdot m$	torque	energy	(-2,2,1,0)	AIP 42; CRC F113, F379; M 3-52
torr	Pa	pressure	pressure	(-2,-1,1,0)	CRC F129, F285, F315, F358, F360
total angular momentum quantum number	1	quantum number	number	(0,0,0,0)	AIP 38
township	m^2	area	area	(0,2,0,0)	CRC F358; M 1-24
transmissibility	1	ratio	number	(0,0,0,0)	CRC E422
transmittance	1	ratio	number	(0,0,0,0)	CRC E210

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
transport diffusion coefficient	$\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}\cdot\text{Pa}^{-1}$	transport diffusion coefficient	gas permeance	(1,-1,-1,0)	Sz 59, 685
tropical year	s	time	time	(1,0,0,0)	CRC F78, F129
typp	$\text{m}\cdot\text{kg}^{-1}$	specific length	specific length	(0,1,-1,0)	Webster's
unit magnetic pole	$\text{A}\cdot\text{n}\cdot\text{m}$	magnetic pole strength	pole strength	(-1,1,0,1)	M 15-4
unit pole	Wb	magnetic flux	magnetic flux	(-1,2,1,-1)	CRC F358; M 1-24, 15-4
vapor capacity	Pa^{-1}	specific vapor capacity	compressibility	(2,1,-1,0)	CRC F365
vapor expansion intensity	$\text{kg}\cdot\text{m}^{-3}\cdot\text{K}^{-1}$	vapor expansion intensity	vapor expansion intensity	(2,-5,0,0)	CRC F379
vapor pressure	Pa	pressure	pressure	(-2,-1,1,0)	CRC B455, F130
var	W	<i>i</i> power	power	(-3,2,1,0)	M 15-3
vara	m	distance	distance	(0,1,0,0)	M 1-16
velocity	$\text{m}\cdot\text{s}^{-1}$	velocity	linear velocity	(-1,1,0,0)	AIP 38; CRC E44, F131, F283; M 1-18, 3-52; MH 2416
velocity gradient	s^{-1}	velocity per meter	angular velocity	(-1,0,0,0)	CRC F379
vibrational quantum number	1	quantum number	number	(0,0,0,0)	AIP 40
viscosity	$\text{Pa}\cdot\text{s}$	dynamic viscosity	dynamic viscosity	(-1,-1,1,0)	CRC F37, F61, F63, F65, F131; M 1-18, 3-52
visibility	$\text{lm}\cdot\text{W}^{-1}$	ratio	number	(0,0,0,0)	CRC F131
voidage	1	ratio	number	(0,0,0,0)	CRC F363
voltage	V	electric potential	electric potential	(-2,2,1,-1)	CRC F131, F134, F283, F313, F360, F364; M 1-18; MH 2415
volume	m^3	volume	volume	(0,3,0,0)	AIP 40; CRC F132, F283, F363; M 1-18, 3-52; MH 2416

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation		SI Units	Measurement	Dimension		Dims	Reference
volume charge density		$C \cdot m^{-3}$	volume charge density	electric charge density		(0,-3,0,1)	Sz 58, 677
volume conductivity		$S \cdot m^{-1}$	volume conductivity	conductivity		(1,-3,-1,2)	CRC F87
volume flow		$m^3 \cdot s^{-1}$	volume flow	volume flow rate		(-1,3,0,0)	CRC F363; M 3-52
volume fraction		1	ratio	number		(0,0,0,0)	AIP 46; Sz 685
volume magnetic susceptibility		1	ratio	number		(0,0,0,0)	AIP 46; Wikipedia
volume number density		m^{-3}	volume number density	volume number density		(0,-3,0,0)	Wikipedia: number density
volumetric cooling area		m^{-1}	volumetric cooling area	linear number density		(0,-1,0,0)	CRC F363
volumetric thermal expansion coefficient		K^{-1}	volume thermal expansion	thermal expansion		(2,-2,-1,0)	CRC F128; Sz 57, 676
vorticity tensor		s^{-2}	vorticity	angular acceleration		(-2,0,0,0)	CRC F378
watt		W	power	power		(-3,2,1,0)	CRC F134, F283, F313, F358, F360; M 1-18, 3-52; MH 2415, 2422
wave number		m^{-1}	wave number	linear number density		(0,-1,0,0)	AIP 46; CRC F132; M 1-18; Sz 57, 675, 681
wave vector		m^{-1}	wave number	linear number density		(0,-1,0,0)	AIP 46
wavelength		m	distance	distance		(0,1,0,0)	AIP 45; CRC F132
weber		Wb	magnetic flux	magnetic flux		(-1,2,1,-1)	CRC F132, F134, F283, F313, F358; M 1-18; MH 2416
week		s	time	time		(1,0,0,0)	CRC F359
weight		N	force	force		(-2,1,1,0)	AIP 44; CRC F112, F132
weiss temperature		K	temperature	energy		(-2,2,1,0)	AIP 46

Table 1: Catalog of Synonymous Dimensions: alphabetical listing

Citation	SI Units	Measurement	Dimension	Dims	Reference
work	J	energy	energy	(-2,2,1,0)	AIP 44; CRC F132, F134; M 1-18, 3-52; MH 2415
x-ray density	$\text{kg}\cdot\text{m}^{-3}$	density	density	(0,-3,1,0)	CRC D38
x-unit	m	distance	distance	(0,1,0,0)	CRC F132, F359
yard	m	distance	distance	(0,1,0,0)	CRC F359; M 1-16; MH 2417
year	s	time	time	(1,0,0,0)	CRC F359
yield strength	Pa	stress	pressure	(-2,-1,1,0)	CRC F133, F134
yield stress	Pa	stress	pressure	(-2,-1,1,0)	CRC F364
young's modulus	Pa	stress	pressure	(-2,-1,1,0)	AIP 41; CRC F64; Sz 57, 676

The Catalog of Synonymous Dimensions

by Russ Hanush

Part B: dimensional listing

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-6,1,0,0)	linear pop	change in crackle	pop	$\text{m}\cdot\text{s}^{-6}$	Sprott, Visser
(-5,1,0,0)	linear crackle	change in snap	crackle	$\text{m}\cdot\text{s}^{-5}$	Sprott, Visser
(-4,1,0,0)	linear snap	change in jerk	jounce	$\text{m}\cdot\text{s}^{-4}$	Sprott, Visser
(-4,1,0,0)	linear snap	change in jerk	snap	$\text{m}\cdot\text{s}^{-4}$	Sprott, Visser
(-4,1,0,0)	linear snap	change in jerk	spasm	$\text{m}\cdot\text{s}^{-4}$	Sprott
(-4,1,0,0)	linear snap	change in jerk	sprite	$\text{m}\cdot\text{s}^{-4}$	Sprott
(-4,1,0,0)	linear snap	change in jerk	surge (2)	$\text{m}\cdot\text{s}^{-4}$	Sprott
(-3,-1,1,0)	heat source power	heat source power	heat source power	$\text{W}\cdot\text{m}^{-3}$	CRC F366
(-3,0,0,0)	angular jerk	angular jerk	angular jerk	$\text{rad}\cdot\text{s}^{-3}$	Sz 57, 694
(-3,0,1,0)	energy flux density	emitted luminous power density	apostilb	$\text{cd}\cdot\text{m}^{-2}$	CRC F346
(-3,0,1,0)	energy flux density	emitted luminous power density	brightness	$\text{cd}\cdot\text{m}^{-2}$	CRC F83

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-3,0,1,0)	energy density	flux power per area	effective radiation	$\text{W}\cdot\text{m}^{-2}$	CRC F93
(-3,0,1,0)	energy density	flux power per area	emittance (1)	$\text{W}\cdot\text{m}^{-2}$	CRC F95
(-3,0,1,0)	energy density	flux energy per area second	energy fluence rate	$\text{W}\cdot\text{m}^{-2}$	AIP 46; Sz 59, 686
(-3,0,1,0)	energy density	flux energy per area second	energy flux density	$\text{W}\cdot\text{m}^{-2}$	Sz 59, 686
(-3,0,1,0)	energy density	flux power per area	excitance	$\text{W}\cdot\text{m}^{-2}$	CRC F97
(-3,0,1,0)	energy density	flux received luminous power density	foot-candle	lx	CRC E210, F99, F104, F350; M 1-21
(-3,0,1,0)	energy density	flux emitted luminous power density	foot-lambert	$\text{cd}\cdot\text{m}^{-2}$	CRC E210, F99, F350; M 1-22
(-3,0,1,0)	energy density	flux heat power density	heat flux density	$\text{J}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	CRC F363, 366; Sz 677
(-3,0,1,0)	energy density	flux received luminous power density	illuminance	lx	AIP 41; CRC E210, F104, F134, F283, F314, F341; M 1-18
(-3,0,1,0)	energy density	flux received luminous power density	illumination	lx	CRC E210, F104; MH 2416
(-3,0,1,0)	energy density	flux wave power density	intensity of radiation	$\text{W}\cdot\text{m}^{-2}$	CRC F105
(-3,0,1,0)	energy density	flux received wave energy	irradiance	$\text{W}\cdot\text{m}^{-2}$	CRC E209, F107; Sz 58, 681
(-3,0,1,0)	energy density	flux emitted luminous power density	lambert	$\text{cd}\cdot\text{m}^{-2}$	CRC E210, F108, F353; M 1-23
(-3,0,1,0)	energy density	flux emitted luminous power density	luminance	$\text{cd}\cdot\text{m}^{-2}$	CRC E207, E210, F110, F283, F341; M 1-18; MH 2416
(-3,0,1,0)	energy density	flux received luminous power density	luminous emittance	lx	CRC E210, F97
(-3,0,1,0)	energy density	flux received luminous power density	luminous excitation	lx	CRC E210, F97
(-3,0,1,0)	energy density	flux received luminous power density	luminous density flux	lx	CRC E210

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-3,0,1,0)	energy density	flux received luminous power density	lux	lx	CRC E210, F104, F134, F283, F314, F353; M 1-18; MH 2416
(-3,0,1,0)	energy density	flux received luminous power density	meter-candle	lx	CRC F354
(-3,0,1,0)	energy density	flux emitted luminous power density	nit	$\text{cd}\cdot\text{m}^{-2}$	CRC E210, F355
(-3,0,1,0)	energy density	flux received luminous power density	nox	lx	CRC F355
(-3,0,1,0)	energy density	flux received luminous power density	phot	lx	CRC E210, F104, F118, F341, F355; M 1-23
(-3,0,1,0)	energy density	flux directional energy flux	poynting vector	$\text{J}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	AIP 77
(-3,0,1,0)	energy density	flux heat flow	pyron	$\text{J}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	CRC F120
(-3,0,1,0)	energy density	flux power per area and solid angle	radiance	$\text{W}\cdot\text{m}^{-2}\cdot\text{sr}^{-1}$	CRC E209; Sz 58, 681
(-3,0,1,0)	energy density	flux power per area	radiant emit-tance	$\text{W}\cdot\text{m}^{-2}$	CRC E209
(-3,0,1,0)	energy density	flux fluence rate	radiant energy fluence rate	$\text{W}\cdot\text{m}^{-2}$	AIP 46
(-3,0,1,0)	energy density	flux power per area	radiant exci-tance	$\text{W}\cdot\text{m}^{-2}$	CRC E209, F97
(-3,0,1,0)	energy density	flux power per area	radiant flux den-sity	$\text{W}\cdot\text{m}^{-2}$	CRC E209
(-3,0,1,0)	energy density	flux sound intensity	sound intensity	$\text{W}\cdot\text{m}^{-2}$	M 12-136; Sz 58, 683
(-3,0,1,0)	energy density	flux emitted luminous power density	stilb	$\text{cd}\cdot\text{m}^{-2}$	CRC E210, F341, F358; M 1-24
(-3,1,0,0)	linear jerk	Change in acceler-ation	bounce	$\text{m}\cdot\text{s}^{-3}$	Visser
(-3,1,0,0)	linear jerk	Change in acceler-ation	jerk	$\text{m}\cdot\text{s}^{-3}$	Sandin, Sprott, Schot, Visser

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-3,1,0,0)	linear jerk	Change in acceleration	jolt	$\text{m}\cdot\text{s}^{-3}$	Visser
(-3,1,0,0)	linear jerk	linear jerk	linear jerk	$\text{m}\cdot\text{s}^{-3}$	Sz 57, 694
(-3,1,0,0)	linear jerk	Change in acceleration	pulse	$\text{m}\cdot\text{s}^{-3}$	Visser
(-3,1,0,0)	linear jerk	Change in acceleration	second acceleration	$\text{m}\cdot\text{s}^{-3}$	Schot
(-3,1,0,0)	linear jerk	Change in acceleration	shock	$\text{m}\cdot\text{s}^{-3}$	Visser
(-3,1,0,0)	linear jerk	Change in acceleration	super-acceleration	$\text{m}\cdot\text{s}^{-3}$	Visser
(-3,1,0,0)	linear jerk	Change in acceleration	surge (1)	$\text{m}\cdot\text{s}^{-3}$	Visser
(-3,2,0,0)	specific power	absorbed dose rate	absorbed dose rate	$\text{Gy}\cdot\text{s}^{-1}$	CRC F360; Sz 59, 687
(-3,2,0,0)	specific power	dose equivalent rate	dose equivalent rate	$\text{Sv}\cdot\text{s}^{-1}$	CRC F360; Sz 687
(-3,2,0,0)	specific power	absorbed dose rate	kerma rate	$\text{Gy}\cdot\text{s}^{-1}$	CRC F360
(-3,2,1,0)	power	power	apparent power	W	M 15-3
(-3,2,1,0)	power	emitted luminous power	candela	cd	CRC F84, F282, F347; M 1-18; MH 2415
(-3,2,1,0)	power	emitted luminous power	candlepower	cd	CRC E210
(-3,2,1,0)	power	heat flow rate	heat flux	W	CRC F363; Sz 57, 677
(-3,2,1,0)	power	emitted luminous power	hefner	cd	CRC F110, F351
(-3,2,1,0)	power	power	horsepower	W	CRC F103, F351; MH 2422
(-3,2,1,0)	power	emitted luminous power	international candle	cd	CRC F106
(-3,2,1,0)	power	received luminous power	lumen	lm	CRC E210, F110, F134, F283, F314, F353; M 1-18; MH 2416

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-3,2,1,0)	power	received luminous power	luminous flux	lm	AIP 47; CRC E210, F110, F134, F283, F314; M 1-18; MH 2416
(-3,2,1,0)	power	emitted luminous power	luminous intensity	cd	AIP 41; CRC E210, F110, F282; M 1-18; MH 2415
(-3,2,1,0)	power	power	power	W	AIP 43; CRC F119, F134, F283, F313, F360, F364; M 1-18, 3-52; MH 2415
(-3,2,1,0)	power	power	radiant flux	W	CRC E209, F134; Sz 58, 681
(-3,2,1,0)	power	power per solid angle	radiant intensity	$W \cdot sr^{-1}$	CRC E209; M 1-18
(-3,2,1,0)	power	power	radiant power	W	Sz 58, 681
(-3,2,1,0)	power	<i>i</i> power	reactive power	W	M 15-3
(-3,2,1,0)	power	sound power	sound energy flux	W	Sz 58, 683
(-3,2,1,0)	power	power	sound power	W	Sz 58, 683
(-3,2,1,0)	power	<i>i</i> power	var	W	M 15-3
(-3,2,1,0)	power	power	watt	W	CRC F134, F283, F313, F358, F360; M 1-18, 3-52; MH 2415, 2422
(-2,-2,1,0)	pressure gradient	pressure gradient	pressure gradient	$Pa \cdot m^{-1}$	CRC F366
(-2,-2,1,0)	pressure gradient	force per volume	specific weight	$N \cdot m^{-3}$	M 3-52
(-2,-1,1,0)	pressure	pressure	absolute pressure	Pa	CRC F73, F119
(-2,-1,1,0)	pressure	pressure	acoustic pressure	Pa	AIP 39
(-2,-1,1,0)	pressure	pressure	atmosphere	Pa	CRC F78, F284, F346; MH 2421

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-2,-1,1,0)	pressure	pressure	bar	Pa	CRC F80, F284, F315, F346; MH 2421
(-2,-1,1,0)	pressure	pressure	barye	Pa	CRC F80, F346
(-2,-1,1,0)	pressure	volume elasticity	bulk modulus	Pa	AIP 42; CRC B214, F64, F84, F363; Sz 302, 596, 599
(-2,-1,1,0)	pressure	pressure	centimeter of mercury	Pa	CRC F348
(-2,-1,1,0)	pressure	pressure	centimeter of water	Pa	CRC F348
(-2,-1,1,0)	pressure	stress	compressive strength	Pa	CRC F64
(-2,-1,1,0)	pressure	pressure	dynamic pressure	Pa	CRC F93
(-2,-1,1,0)	pressure	pressure	dynamic slip resistance	Pa	CRC F378
(-2,-1,1,0)	pressure	stress	elastic limit	Pa	CRC F93
(-2,-1,1,0)	pressure	stress	elastic modulus	Pa	CRC B214, F93, F363; M 3-52
(-2,-1,1,0)	pressure	energy density	electromagnetic energy density	$\text{J}\cdot\text{m}^{-3}$	AIP 40
(-2,-1,1,0)	pressure	pressure	foot of water	Pa	CRC F350
(-2,-1,1,0)	pressure	pressure	fugacity	Pa	CRC F100, F291
(-2,-1,1,0)	pressure	pressure	gauge pressure	Pa	CRC F119
(-2,-1,1,0)	pressure	hardness	hardness (1)	Pa	CRC E106
(-2,-1,1,0)	pressure	pressure	hydrostatic pressure	Pa	CRC F104
(-2,-1,1,0)	pressure	hysterisis loss	hysterisis loss	$\text{J}\cdot\text{m}^{-3}$	CRC E128
(-2,-1,1,0)	pressure	pressure	impact pressure	Pa	CRC F104
(-2,-1,1,0)	pressure	pressure	inch of mercury	Pa	CRC F351
(-2,-1,1,0)	pressure	pressure	inch of water	Pa	CRC F351
(-2,-1,1,0)	pressure	energy density	luminous density	$\text{lm}\cdot\text{s}\cdot\text{m}^{-3}$	CRC E210

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-2,-1,1,0)	pressure	pressure	magnetic pressure	Pa	CRC F330
(-2,-1,1,0)	pressure	pressure	millimeter of mercury	Pa	CRC F285, F354
(-2,-1,1,0)	pressure	pressure	millimeter of water	Pa	CRC F354
(-2,-1,1,0)	pressure	stress	modulus of elasticity	Pa	CRC F113, F363; M 3-52; Sz 676
(-2,-1,1,0)	pressure	stress	modulus of rigidity	Pa	CRC F64, F94
(-2,-1,1,0)	pressure	stress	modulus of shear	Pa	Sz 57, 676
(-2,-1,1,0)	pressure	hardness	mohs	Pa	CRC E106
(-2,-1,1,0)	pressure	stress	normal stress	Pa	AIP 46
(-2,-1,1,0)	pressure	pressure	osmotic pressure	Pa	AIP 46
(-2,-1,1,0)	pressure	pressure	partial pressure	Pa	CRC F117, F291, F292
(-2,-1,1,0)	pressure	pressure	pascal	Pa	CRC F117, F134, F283, F313, F355, F360; M 1-18; MH 2416
(-2,-1,1,0)	pressure	pressure	pressure	Pa	AIP 39; CRC F119, F134, F283, F313, F360, F363; M 1-18, 3-52; MH 2416
(-2,-1,1,0)	pressure	pressure	psi	Pa	CRC F356
(-2,-1,1,0)	pressure	energy density	radiant density	$\text{J}\cdot\text{m}^{-3}$	CRC E209
(-2,-1,1,0)	pressure	stress	shear modulus	Pa	AIP 41
(-2,-1,1,0)	pressure	stress	shear strength	Pa	CRC F124
(-2,-1,1,0)	pressure	stress	shear stress	Pa	AIP 46; CRC F364; M 3-52
(-2,-1,1,0)	pressure	pressure	sound pressure	Pa	Sz 58, 682
(-2,-1,1,0)	pressure	pressure	stagnation pressure	Pa	CRC F126

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-2,-1,1,0)	pressure	pressure	static pressure	Pa	CRC F126
(-2,-1,1,0)	pressure	stress	stress	Pa	CRC F127, F134, F283; M 1-18
(-2,-1,1,0)	pressure	stress	tensile strength	Pa	CRC B214
(-2,-1,1,0)	pressure	pressure	torr	Pa	CRC F129, F285, F315, F358, F360
(-2,-1,1,0)	pressure	pressure	vapor pressure	Pa	CRC B455, F130
(-2,-1,1,0)	pressure	stress	yield strength	Pa	CRC F133, F134
(-2,-1,1,0)	pressure	stress	yield stress	Pa	CRC F364
(-2,-1,1,0)	pressure	stress	young's modulus	Pa	AIP 41; CRC F64; Sz 57, 676
(-2,0,0,0)	angular acceleration	angular acceleration	angular acceleration	rad·s ⁻²	AIP 44; CRC F77; M 1-18, 3-52; MH 2416
(-2,0,0,0)	angular acceleration	strain rate	rate-of-strain tensor	s ⁻²	CRC F378
(-2,0,0,0)	angular acceleration	vorticity	vorticity tensor	s ⁻²	CRC F378
(-2,0,1,0)	surface tension	heat transmission	langley	J·m ⁻²	CRC F109, F353; M 1-23
(-2,0,1,0)	surface tension	radiant exposure	radiant exposure	J·m ⁻²	Sz 59, 687
(-2,0,1,0)	surface tension	surface tension	surface tension	N·m ⁻¹	AIP 44; CRC B214, F33, F34, F64, F127, F364; M 3-52; MH 2416; Sz 57, 675
(-2,1,0,0)	linear acceleration	acceleration	acceleration	m·s ⁻²	AIP 38; CRC F283, F363; M 1-18, 3-52; MH 2416
(-2,1,0,0)	linear acceleration	acceleration	g	m·s ⁻²	CRC F363; Sz 57, 673
(-2,1,0,0)	linear acceleration	acceleration	gal	m·s ⁻²	CRC F100, F339, F350; M 1-22
(-2,1,1,-1)	electric field	dielectric strength	dielectric strength	V·m ⁻¹	CRC F91

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-2,1,1,-1)	electric field	electric field	electric field	$N \cdot C^{-1}$	AIP 41
(-2,1,1,-1)	electric field	electric field	electric field in- tensity	$N \cdot C^{-1}$	CRC F94
(-2,1,1,-1)	electric field	electric field	electric field strength	$N \cdot C^{-1}$	CRC F283; M 1- 18; MH 2416; Sz 58, 677
(-2,1,1,0)	force	force	dyne	N	CRC F284, F349; MH 2420
(-2,1,1,0)	force	force	flow resistance	N	CRC F363, F366
(-2,1,1,0)	force	force	force	N	AIP 41; CRC F134, F283, F313, F363; M 1-18, 3-52; MH 2415
(-2,1,1,0)	force	force	kip	N	CRCC F353; M 1- 23
(-2,1,1,0)	force	linear energy den- sity	lineal energy	$J \cdot m^{-1}$	CRC F360
(-2,1,1,0)	force	energy transfer	linear energy transfer	$J \cdot m^{-1}$	CRC F360
(-2,1,1,0)	force	stopping power	linear stopping power	$J \cdot m^{-1}$	AIP 43
(-2,1,1,0)	force	force	newton	N	CRC F114, F134, F283, F313, F354; M1-18, 3-52; MH 2415
(-2,1,1,0)	force	force	pond	N	CRC F356; MH 2420
(-2,1,1,0)	force	force	poundal	N	M 1-24; MH 2420
(-2,1,1,0)	force	stopping power	stopping power	$J \cdot m^{-1}$	AIP 43
(-2,1,1,0)	force	surface diffusivity	surface diffusiv- ity	$kg \cdot m \cdot s^{-2}$	CRC F364
(-2,1,1,0)	force	force	weight	N	AIP 44; CRC F112, F132
(-2,2,0,0)	specific energy	absorbed dose	absorbed dose	Gy	CRC F101, F134, F283, F314, F360
(-2,2,0,0)	specific energy	dose equivalent	dose equivalent	Sv	CRC F314, F360

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement		Citation	SI units	Reference
(-2,2,0,0)	specific energy	potential per mass	energy	dynamic height	$\text{J}\cdot\text{kg}^{-1}$	CRC F92
(-2,2,0,0)	specific energy	potential per mass	energy	dynamic meter	$\text{J}\cdot\text{kg}^{-1}$	CRC F92
(-2,2,0,0)	specific energy	specific enthalpy		enthalpy (1)	$\text{J}\cdot\text{kg}^{-1}$	CRC D173, E25, F10
(-2,2,0,0)	specific energy	potential per mass	energy	geopotential height	$\text{J}\cdot\text{kg}^{-1}$	CRC F100
(-2,2,0,0)	specific energy	potential per mass	energy	geopotential meter	$\text{J}\cdot\text{kg}^{-1}$	CRC F101
(-2,2,0,0)	specific energy	absorbed dose		gray	Gy	CRC F101, F134, F283, F314, F351, F360
(-2,2,0,0)	specific energy	potential per mass	energy	head	$\text{J}\cdot\text{kg}^{-1}$	CRC F366
(-2,2,0,0)	specific energy	heat capacity (b)		heat capacity (1)	$\text{J}\cdot\text{kg}^{-1}$	CRC D174
(-2,2,0,0)	specific energy	heat content		heat content	$\text{J}\cdot\text{kg}^{-1}$	CRC D174
(-2,2,0,0)	specific energy	specific energy		heat equivalent	$\text{J}\cdot\text{kg}^{-1}$	CRC F102
(-2,2,0,0)	specific energy	specific heat (a)		heat of vaporization	$\text{J}\cdot\text{kg}^{-1}$	CRC F363
(-2,2,0,0)	specific energy	absorbed dose		kerma	Gy	AIP 42; CRC F134, F360
(-2,2,0,0)	specific energy	specific heat (a)		latent heat of phase change	$\text{J}\cdot\text{kg}^{-1}$	CRC F363, F364, F377
(-2,2,0,0)	specific energy	absorbed dose		rad	Gy	CRC F120, F284, F357, F360, F361; M 1-24; Sz 62, 692
(-2,2,0,0)	specific energy	dose equivalent		radiation dose equivalent	Sv	CRC F124
(-2,2,0,0)	specific energy	dose equivalent		rem	Sv	CRC F122, F123, F357, F360, F361; M 1-24; Sz 62, 692
(-2,2,0,0)	specific energy	absorbed dose		rep	Gy	CRC F123
(-2,2,0,0)	specific energy	dose equivalent		sievert	Sv	CRC F124, F314

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-2,2,0,0)	specific energy	specific energy	specific energy	$\text{J}\cdot\text{kg}^{-1}$	AIP 38; CRC F134, F302, F360; Sz 57, 672
(-2,2,0,0)	specific energy	specific enthalpy	specific enthalpy	$\text{J}\cdot\text{kg}^{-1}$	Sz 57, 677
(-2,2,0,0)	specific energy	specific heat (a)	specific heat (1)	$\text{J}\cdot\text{kg}^{-1}$	CRC F64
(-2,2,0,0)	specific energy	specific heat (a)	specific heat of fusion	$\text{J}\cdot\text{kg}^{-1}$	CRC B455, C666, C671, D187
(-2,2,0,0)	specific energy	specific heat (a)	specific heat of vaporization	$\text{J}\cdot\text{kg}^{-1}$	CRC B455, F64
(-2,2,0,0)	specific energy	specific molar heat	specific molar heat of combustion	$\text{J}\cdot\text{kg}^{-1}\cdot\text{mol}^{-1}$	CRC D282
(-2,2,0,0)	specific energy	specific molar heat	specific molar heat of formation	$\text{J}\cdot\text{kg}^{-1}\cdot\text{mol}^{-1}$	CRC D282
(-2,2,0,0)	specific energy	specific molar heat	specific molar heat of transition	$\text{J}\cdot\text{kg}^{-1}\cdot\text{mol}^{-1}$	CRC D43
(-2,2,1,-1)	electric potential	electric potential	electric dipole potential	V	AQ 28; Sz 58, 680
(-2,2,1,-1)	electric potential	electric potential	electric potential	V	AIP 43; CRC F134, F283, F313, F360; M 1-18; MH 2415
(-2,2,1,-1)	electric potential	electric potential	electromotive force	V	AIP 41; AQ 28; CRC F94, F134, F313; M 1-18, 15-3
(-2,2,1,-1)	electric potential	electric potential	overpotential	V	CRC F117
(-2,2,1,-1)	electric potential	heat flow per unit charge	peltier coefficient	V	AIP 46
(-2,2,1,-1)	electric potential	electric potential	potential difference	V	AIP 43; CRC F134, F313
(-2,2,1,-1)	electric potential	electric potential	reduction potential	V	CRC D159
(-2,2,1,-1)	electric potential	power per current	thermoelectromotive force	V	AIP 41

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-2,2,1,-1)	electric potential	electric potential	voltage	V	CRC F131, F134, F283, F313, F360, F364; M 1-18; MH 2415
(-2,2,1,0)	energy	temperature	absolute temperature	K	CRC F73
(-2,2,1,0)	energy	energy	acceptor ionization energy	J	AIP 41; CRC F74
(-2,2,1,0)	energy	energy	activation energy	J	CRC F363
(-2,2,1,0)	energy	energy	atomic energy	J	CRC F79
(-2,2,1,0)	energy	torque	bending moment	N·m	AIP 42
(-2,2,1,0)	energy	temperature	boiling point	K	CRC B211, B455, D187, F64
(-2,2,1,0)	energy	energy	bond energy	J	CRC F82
(-2,2,1,0)	energy	energy	btu	J	CRC F83, F285, F346; MH 2422
(-2,2,1,0)	energy	energy	calorie	J	CRC F84, F285, F347; MH 2422
(-2,2,1,0)	energy	temperature	characteristic rotational temperature	K	AIP 46
(-2,2,1,0)	energy	temperature	characteristic vibrational temperature	K	AIP 46
(-2,2,1,0)	energy	energy	chemical affinity	J·mol ⁻¹	AIP 40
(-2,2,1,0)	energy	potential energy	chemical potential	J·mol ⁻¹	AIP 45
(-2,2,1,0)	energy	temperature	compensation point	K	CRC F87
(-2,2,1,0)	energy	temperature	curie temperature	K	AIP 43
(-2,2,1,0)	energy	temperature	debye temperature	K	AIP 46
(-2,2,1,0)	energy	temperature	degree celsius	K	AIP 44; CRC F134, F283; MH 2423

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-2,2,1,0)	energy	temperature	degree centi- grade	K	CRC F85, F349
(-2,2,1,0)	energy	temperature	degree fahrenheit	K	CRC F349; MH 2423
(-2,2,1,0)	energy	temperature	degree rankine	K	CRC F121, F285, F349; MH 2423
(-2,2,1,0)	energy	energy	disintegration energy	J	AIP 43
(-2,2,1,0)	energy	energy	donor ionization energy	J	AIP 41
(-2,2,1,0)	energy	temperature	einstein temper- ature	K	AIP 46
(-2,2,1,0)	energy	energy	electron affinity	J	CRC E65, F95
(-2,2,1,0)	energy	energy	electronvolt	J	CRC F285, F349, F360
(-2,2,1,0)	energy	energy	energy	J	AIP 41; CRC F134, F283, F313; M 1-18, 3-52
(-2,2,1,0)	energy	energy	energy gap	J	AIP 41
(-2,2,1,0)	energy	enthalpy	enthalpy (2)	J·mol ⁻¹	CRC F65
(-2,2,1,0)	energy	enthalpy	enthalpy (3)	J	AIP 41; Sz 57, 676
(-2,2,1,0)	energy	energy	erg	J	CRC F284, F349
(-2,2,1,0)	energy	energy	exchange inte- gral	J	AIP 42
(-2,2,1,0)	energy	energy	fermi energy	J	AIP 41
(-2,2,1,0)	energy	torque	foot-pound	N·m	MH 2422
(-2,2,1,0)	energy	torque	foot-pound-force	N·m	M 1-22
(-2,2,1,0)	energy	torque	foot-poundal	N·m	CRC F350; M 1-22; MH 2422;
(-2,2,1,0)	energy	energy	free energy	J	AIP 41
(-2,2,1,0)	energy	energy	hartree	J	CRC F219

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-2,2,1,0)	energy	heat	heat	J	CRC F102; MH 2415
(-2,2,1,0)	energy	heat	heat effect	J	CRC F102
(-2,2,1,0)	energy	energy	ionization potential	J	CRC E80, E87, F106
(-2,2,1,0)	energy	energy	joule	J	CRC F107, F134, F283, F313, F352; M 1-18, 3-52; MH 2415, 2422
(-2,2,1,0)	energy	temperature	kelvin	K	CRC F108, F282, F352; M 1-18; MH 2415
(-2,2,1,0)	energy	energy	kinetic energy	J	AIP 41; CRC F108
(-2,2,1,0)	energy	heat	latent heat of vaporization	J	CRC F109
(-2,2,1,0)	energy	molar energy	lattice energy	J·mol ⁻¹	CRC D101, F109
(-2,2,1,0)	energy	energy	level width	J	AIP 46
(-2,2,1,0)	energy	energy	liter-atmosphere	J	CRC F353
(-2,2,1,0)	energy	energy	liter-bar	J	CRC F353
(-2,2,1,0)	energy	luminous energy	luminous energy	lm·s	CRC E210
(-2,2,1,0)	energy	temperature	melting point	K	CRC B210, B455, C31, C671
(-2,2,1,0)	energy	molar energy	molar energy	J·mol ⁻¹	CRC F302; Sz 59, 684
(-2,2,1,0)	energy	molar heat	molar heat of dilution	J·mol ⁻¹	CRC D121
(-2,2,1,0)	energy	molar heat	molar heat of formation	J·mol ⁻¹	CRC E110, F64
(-2,2,1,0)	energy	molar heat	molar heat of fusion	J·mol ⁻¹	CRC B211, C666, C671, F65, F70
(-2,2,1,0)	energy	molar heat	molar heat of sublimation	J·mol ⁻¹	CRC B211
(-2,2,1,0)	energy	molar heat	molar heat of transformation	J·mol ⁻¹	CRC B211

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-2,2,1,0)	energy	molar heat	molar heat of transition	J·mol ⁻¹	CRC D46
(-2,2,1,0)	energy	molar heat	molar heat of vaporization	J·mol ⁻¹	CRC F65, F70
(-2,2,1,0)	energy	molar energy	molecular energy	J·mol ⁻¹	CRC D50
(-2,2,1,0)	energy	torque	moment of couple	N·m	AIP 43; CRC F88
(-2,2,1,0)	energy	torque	moment of force	N·m	CRC F113; M 3-4; Sz 57
(-2,2,1,0)	energy	temperature	neel temperature	K	AIP 43; CRC F114
(-2,2,1,0)	energy	energy	potential energy	J	AIP 41
(-2,2,1,0)	energy	energy	quantity of heat	J	AIP 43; CRC F134, F315; M 1-18
(-2,2,1,0)	energy	luminous energy	quantity of light	lm·s	AIP 43; CRC E210
(-2,2,1,0)	energy	energy	quantum	J	CRC F120
(-2,2,1,0)	energy	energy	radiant energy	J	CRC E209; Sz 58, 681
(-2,2,1,0)	energy	energy	reaction energy	J	AIP 43
(-2,2,1,0)	energy	temperature	spontaneous-ignition temperature	K	CRC F126
(-2,2,1,0)	energy	temperature	superconductor critical transition temperature	K	AIP 43
(-2,2,1,0)	energy	energy	superconductor energy gap	J	AIP 46
(-2,2,1,0)	energy	luminous energy	talbot	lm·s	AQ 25; CRC E210
(-2,2,1,0)	energy	temperature	temperature	K	AIP 40; CRC F127, F282; M 1-18; MH 2415
(-2,2,1,0)	energy	energy	therm	J	CRC F358
(-2,2,1,0)	energy	heat	thermodynamic energy	J	AIP 43
(-2,2,1,0)	energy	energy	ton (3)	J	M 1-24

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension		Measurement		Citation	SI units	Reference
(-2,2,1,0)	energy		torque		torque	N·m	AIP 42; CRC F113, F379; M 3-52
(-2,2,1,0)	energy		temperature		weiss temperature	K	AIP 46
(-2,2,1,0)	energy		energy		work	J	AIP 44; CRC F132, F134; M 1-18, 3-52; MH 2415
(-2,3,-1,0)	gravitational constant		gravitational constant		gravitational constant	$\text{m}^3 \cdot \text{kg}^{-1} \cdot \text{s}^{-2}$	CRC F101
(-2,3,1,-2)	coulomb constant		coulomb constant		coulomb constant	$\text{N} \cdot \text{m}^2 \cdot \text{C}^{-2}$	Wikipedia
(-2,3,1,-1)	electric flux		electric flux		electric flux (1)	V·m	Wikipedia
(-2,4,0,0)	mass stopping power		mass stopping power		mass stopping power	$\text{J} \cdot \text{m}^2 \cdot \text{kg}^{-1}$	CRC F360
(-2,4,1,0)	atomic stopping power		atomic stopping power		atomic stopping power	$\text{J} \cdot \text{m}^2$	AIP 43
(-1,-4,1,0)	acoustic impedance		acoustic impedance		acoustic ohm	$\text{Pa} \cdot \text{s} \cdot \text{m}^{-3}$	efunda
(-1,-3,0,0)	molar reaction rate		collision rate density		collision number	$\text{m}^{-3} \cdot \text{s}^{-1}$	CRC F290
(-1,-3,0,0)	molar reaction rate		superheat limit		homogenous nucleation limit	$\text{m}^{-3} \cdot \text{s}^{-1}$	CRC C721
(-1,-3,0,0)	molar reaction rate		nucleation density rate		limit of superheat	$\text{m}^{-3} \cdot \text{s}^{-1}$	CRC C721
(-1,-3,0,0)	molar reaction rate		molar reaction rate		molar reaction rate	$\text{mol} \cdot \text{m}^{-3} \cdot \text{s}^{-1}$	CRC F288-9
(-1,-3,1,0)	molal reaction rate		molal reaction rate		molal reaction rate	$\text{kg} \cdot \text{m}^{-3} \cdot \text{s}^{-1}$	CRC F363, F366, F379
(-1,-2,0,0)	particle density	flux	particle rate	fluence	fluence rate	$\text{m}^{-2} \cdot \text{s}^{-1}$	AIP 46; CRC F360; Sz 59, 688
(-1,-2,0,0)	particle density	flux	particle rate	fluence	flux density	$\text{m}^{-2} \cdot \text{s}^{-1}$	AIP 46; Sz 59, 688
(-1,-2,0,0)	particle density	flux	heat transfer		heat transfer coefficient	$\text{W} \cdot \text{m}^{-2} \cdot \text{K}^{-1}$	AIP 38; CRC F116, F363; Sz 57, 675

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension		Measurement		Citation		SI units	Reference
(-1,-2,0,0)	particle density	flux	particle rate	fluence	particle rate	fluence	$\text{m}^{-2}\cdot\text{s}^{-1}$	AIP 46; Sz 59, 688
(-1,-2,0,0)	particle density	flux	particle rate	fluence	particle flux density		$\text{m}^{-2}\cdot\text{s}^{-1}$	AIP 46; Sz 59, 688
(-1,-2,0,1)	surface current density	current	surface density	current	current density		$\text{A}\cdot\text{m}^{-2}$	CRC F364
(-1,-2,0,1)	surface current density	current	surface density	current	electric current density		$\text{A}\cdot\text{m}^{-2}$	AIP 38
(-1,-2,0,1)	surface current density	current	surface density	current	electron emission		$\text{A}\cdot\text{m}^{-2}$	CRC E407
(-1,-2,0,1)	surface current density	current	surface density	current	surface current density		$\text{A}\cdot\text{m}^{-2}$	Sz 58, 677
(-1,-2,0,1)	surface current density	current	surface ion emission	ion emission	thermionic current density		$\text{A}\cdot\text{m}^{-2}$	CRC F128
(-1,-2,1,0)	mass flux density		evaporation		evaporation		$\text{kg}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	CRC E407
(-1,-2,1,0)	mass flux density		mass flux density		mass flux density		$\text{kg}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	CRC F363, F365, F379
(-1,-2,1,0)	mass flux density		mass flux density		mass transfer coefficient (1)		$\text{kg}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	CRC F363
(-1,-2,1,0)	mass flux density		mass flux density		mass velocity		$\text{kg}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$	CRC F363
(-1,-2,1,0)	mass flux density		electromagnetic momentum density		poynting vector per c squared		$\text{s}^2\cdot\text{W}\cdot\text{m}^{-4}$	AIP 77
(-1,-1,0,0)	thermal conductivity	con-	thermal conductivity	conductivity	thermal conductivity	conductivity	$\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$	AIP 45; CRC B213, B456, D186, D187, E2, E3, E4, E5, E7, E10, E11, E12, E13, E16, E25, E32, E34, E106, F10, F61, F63, F64, F65, F364, F377; M 1-18; MH 2416; Sz 57, 675
(-1,-1,0,1)	magnetic field		magnetic strength	field	magnetic field		$\text{A}\cdot\text{n}\cdot\text{m}^{-1}$	AQ 28
(-1,-1,0,1)	magnetic field		magnetic strength	field	magnetic intensity	field	$\text{A}\cdot\text{n}\cdot\text{m}^{-1}$	CRC F111; M 15-4; Sz 678

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement		Citation		SI units	Reference
(-1,-1,0,1)	magnetic field	magnetic strength	field	magnetic strength	field	$A \cdot n \cdot m^{-1}$	AIP 41; CRC F283; M 1-18; MH 2416; Sz 58, 678
(-1,-1,0,1)	magnetic field	magnetic strength	field	magnetization		$A \cdot n \cdot m^{-1}$	AIP 42
(-1,-1,0,1)	magnetic field	magnetic strength	field	oersted		$A \cdot n \cdot m^{-1}$	CRC F111, F115, F284, F340, F355; M 1-23
(-1,-1,0,1)	magnetic field	current-turn distance	per	superconductor critical field strength		$A \cdot n \cdot m^{-1}$	AIP 41
(-1,-1,1,0)	dynamic viscosity	vis-	dynamic viscosity	absolute viscosity	viscosity	Pa·s	CRC F38
(-1,-1,1,0)	dynamic viscosity	vis-	dynamic viscosity	dynamic viscosity	viscosity	Pa·s	CRC F10, F283, F364; M 1-18, 3-52; MH 2416; Sz 57, 673
(-1,-1,1,0)	dynamic viscosity	vis-	dynamic viscosity	pascal-second		Pa·s	CRC F355
(-1,-1,1,0)	dynamic viscosity	vis-	dynamic viscosity	poise		Pa·s	CRC F37, F38, F118, F284, F339, F356; M 1-24; MH 2423
(-1,-1,1,0)	dynamic viscosity	vis-	pressure drop	pressure drop		Pa·s	CRC F366
(-1,-1,1,0)	dynamic viscosity	vis-	dynamic viscosity	reyn		Pa·s	CRC F39, F357
(-1,-1,1,0)	dynamic viscosity	vis-	rigidity	rigidity coefficient		Pa·s	CRC F364
(-1,-1,1,0)	dynamic viscosity	vis-	dynamic viscosity	viscosity		Pa·s	CRC F37, F61, F63, F65, F131; M 1-18, 3-52
(-1,0,-1,0)	specific activity	activ-	specific activity	specific activity		$Bq \cdot kg^{-1}$	AIP 37
(-1,0,0,0)	angular velocity	veloc-	radioactivity	activity		Bq	AIP 40; CRC F134, F283, F314, F360; M 1-18
(-1,0,0,0)	angular velocity	veloc-	frequency	angular frequency	fre-	Hz	AIP 46

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-1,0,0,0)	angular velocity	angular velocity	angular velocity	rad·s ⁻¹	CRC F77, F283, F364; M 1-18, 3-52; MH 2416
(-1,0,0,0)	angular velocity	frequency	beat frequency	Hz	CRC F80
(-1,0,0,0)	angular velocity	radioactivity	becquerel	Bq	CRC F81, F134, F283, F314, F346, F360; Sz 54, 667
(-1,0,0,0)	angular velocity	radioactivity	curie	Bq	CRC F284, F315, F349, F360
(-1,0,0,0)	angular velocity	frequency	debye angular frequency	Hz	AIP 46
(-1,0,0,0)	angular velocity	radioactivity	decay constant	Bq	AIP 45
(-1,0,0,0)	angular velocity	frequency	disintegration constant	Hz	AIP 45
(-1,0,0,0)	angular velocity	frequency	frequency	Hz	AIP 38; CRC F134, F283, F313, F363; M 1-18, 3-52; MH 2416
(-1,0,0,0)	angular velocity	rate	growth rate	s ⁻¹	AIP 44
(-1,0,0,0)	angular velocity	frequency	hertz	Hz	CRC F103, F134, F283; M 1-18; MH 2416
(-1,0,0,0)	angular velocity	frequency	larmor circular frequency	Hz	AIP 46
(-1,0,0,0)	angular velocity	radioactivity	radioactivity	Bq	AIP 40; CRC F134, F283, F314, F360; M 1-18
(-1,0,0,0)	angular velocity	frequency	rate of rotation	Hz	CRC F363
(-1,0,0,0)	angular velocity	rate	rate of shear	s ⁻¹	CRC F364
(-1,0,0,0)	angular velocity	angular velocity	rpm	rad·s ⁻¹	CRC F357

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-1,0,0,0)	angular velocity	velocity per meter	velocity gradient	s^{-1}	CRC F379
(-1,0,0,1)	electric current	electric current	ampere	A	CRC F282; M 1-18
(-1,0,0,1)	electric current	magnetomotive force	ampere-turn	A·n	CRC F346
(-1,0,0,1)	electric current	electric current	biot	A	CRC F346
(-1,0,0,1)	electric current	electric current	electric current	A	AIP 41; CRC F282, F313, F360; M 1-18, 15-3
(-1,0,0,1)	electric current	magnetomotive force	gilbert	A·n	CRC F101, F340, F350
(-1,0,0,1)	electric current	magnetomotive force	magnetic potential difference	A·n	AIP 43; CRC F111; M 1-18; Sz 58
(-1,0,0,1)	electric current	magnetomotive force	magnetomotive force	A·n	AIP 41; AQ 28; CRC F111; M 15-4; Sz 58, 679
(-1,0,1,-1)	magnetic flux density	magnetic flux density	gamma (2)	T	CRC F350; M 1-22
(-1,0,1,-1)	magnetic flux density	magnetic flux density	gauss	T	CRC F100, F284, F340, F350; M 1-22
(-1,0,1,-1)	magnetic flux density	magnetic flux density	intensity of magnetization	T	AQ 28; CRC F105
(-1,0,1,-1)	magnetic flux density	magnetic flux density	magnetic flux density	T	AIP 41; AQ 28; CRC F134, F283, F313; M 1-18, 15-4; MH 2416
(-1,0,1,-1)	magnetic flux density	magnetic flux density	magnetic induction	T	AQ 28; CRC F111
(-1,0,1,-1)	magnetic flux density	magnetic flux density	magnetic polarization	T	Sz 58
(-1,0,1,-1)	magnetic flux density	magnetic flux density	surface magnetic density	T	CRC F127
(-1,0,1,-1)	magnetic flux density	magnetic flux density	tesla	T	CRC F134, F283, F358; M 1-18; MH 2416
(-1,0,1,0)	mass flow rate	mass flow	mass flow	$kg \cdot s^{-1}$	AIP 39; CRC F363, F365, F379; M 3-52

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-1,0,1,0)	mass flow rate	mass flow	mass flux	$\text{kg}\cdot\text{s}^{-1}$	CRC F363, F365, F379
(-1,0,1,0)	mass flow rate	mechanical impedance	mechanical impedance	$\text{N}\cdot\text{s}\cdot\text{m}^{-1}$	Sz 58, 683
(-1,0,1,0)	mass flow rate	surface viscosity	surface viscosity	$\text{kg}\cdot\text{s}^{-1}$	CRC F365, F378
(-1,1,0,0)	linear velocity	speed	acoustic velocity	$\text{m}\cdot\text{s}^{-1}$	CRC F75
(-1,1,0,0)	linear velocity	speed	alfven speed	$\text{m}\cdot\text{s}^{-1}$	CRC F76
(-1,1,0,0)	linear velocity	velocity	escape velocity	$\text{m}\cdot\text{s}^{-1}$	CRC F96
(-1,1,0,0)	linear velocity	speed	ips	$\text{m}\cdot\text{s}^{-1}$	CRC F352
(-1,1,0,0)	linear velocity	speed	knot	$\text{m}\cdot\text{s}^{-1}$	CRC F108, F353; M 1-16
(-1,1,0,0)	linear velocity	speed	kph	$\text{m}\cdot\text{s}^{-1}$	CRC F352
(-1,1,0,0)	linear velocity	mass transfer	mass transfer coefficient (2)	$\text{m}\cdot\text{s}^{-1}$	CRC F363, F379
(-1,1,0,0)	linear velocity	speed	mph	$\text{m}\cdot\text{s}^{-1}$	CRC F354
(-1,1,0,0)	linear velocity	speed	speed	$\text{m}\cdot\text{s}^{-1}$	AIP 38; CRC F126
(-1,1,0,0)	linear velocity	velocity	velocity	$\text{m}\cdot\text{s}^{-1}$	AIP 38; CRC E44, F131, F283; M 1-18, 3-52; MH 2416
(-1,1,0,1)	pole strength	magnetic strength	pole pole strength	$\text{A}\cdot\text{n}\cdot\text{m}$	M 15-4
(-1,1,0,1)	pole strength	magnetic strength	pole unit magnetic pole	$\text{A}\cdot\text{n}\cdot\text{m}$	M 15-4
(-1,1,1,-1)	linear magnetic flux density	linear magnetic flux density	magnetic vector potential	$\text{Wb}\cdot\text{m}^{-1}$	AIP 41; Sz 58
(-1,1,1,0)	momentum	momentum	impulse	$\text{kg}\cdot\text{m}\cdot\text{s}^{-1}$	AIP 42; M 3-52; Sz 57, 673
(-1,1,1,0)	momentum	momentum	momentum	$\text{kg}\cdot\text{m}\cdot\text{s}^{-1}$	AIP 39; CRC F114; M 3-52; Sz 57, 673
(-1,2,0,0)	kinematic viscosity	diffusion rate	diffusion coefficient	$\text{m}^2\cdot\text{s}^{-1}$	AIP 41; CRC F49, F50, F91, F283, F363; MH 2416

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-1,2,0,0)	kinematic viscosity	vis- diffusion rate	diffusivity	$\text{m}^2 \cdot \text{s}^{-1}$	CRC F49, F50, F51, F91, F363
(-1,2,0,0)	kinematic viscosity	vis- diffusion rate	dispersion coefficient	$\text{m}^2 \cdot \text{s}^{-1}$	CRC F377
(-1,2,0,0)	kinematic viscosity	vis- diffusion rate	eddy mass diffusivity	$\text{m}^2 \cdot \text{s}^{-1}$	CRC F364
(-1,2,0,0)	kinematic viscosity	vis- kinematic viscosity	eddy viscosity	$\text{m}^2 \cdot \text{s}^{-1}$	CRC F93, F378
(-1,2,0,0)	kinematic viscosity	vis- kinematic viscosity	kinematic viscosity	$\text{m}^2 \cdot \text{s}^{-1}$	AIP 45; CRC F37, F108, F283, F339; M 1-18, 3-52; MH 2416; Sz 57, 673
(-1,2,0,0)	kinematic viscosity	vis- magnetic diffusivity	magnetic diffusivity	$\text{m}^2 \cdot \text{s}^{-1}$	CRC F331
(-1,2,0,0)	kinematic viscosity	vis- diffusion rate	molecular diffusivity	$\text{m}^2 \cdot \text{s}^{-1}$	CRC F363
(-1,2,0,0)	kinematic viscosity	vis- kinematic viscosity	redwood second	$\text{m}^2 \cdot \text{s}^{-1}$	CRC F38
(-1,2,0,0)	kinematic viscosity	vis- kinematic viscosity	saybolt second	$\text{m}^2 \cdot \text{s}^{-1}$	CRC F38
(-1,2,0,0)	kinematic viscosity	vis- kinematic viscosity	stoke	$\text{m}^2 \cdot \text{s}^{-1}$	CRC F37, F38, F126, F284, F339, F358; M 1-24; MH 2423
(-1,2,0,0)	kinematic viscosity	vis- diffusion rate	temperature conductivity	$\text{m}^2 \cdot \text{s}^{-1}$	CRC F363, F377
(-1,2,0,0)	kinematic viscosity	vis- diffusion rate	thermal diffusion coefficient	$\text{m}^2 \cdot \text{s}^{-1}$	AIP 41
(-1,2,0,0)	kinematic viscosity	vis- diffusion rate	thermal diffusivity	$\text{m}^2 \cdot \text{s}^{-1}$	AIP 37; CRC F363, F377
(-1,2,0,1)	magnetic moment	mo- magnetic moment	electromagnetic moment	$\text{J} \cdot \text{T}^{-1}$	Sz 58
(-1,2,0,1)	magnetic moment	mo- magnetic moment	magnetic dipole moment	$\text{J} \cdot \text{T}^{-1}$	AIP 39; CRC B228
(-1,2,0,1)	magnetic moment	mo- magnetic moment	magnetic moment	$\text{J} \cdot \text{T}^{-1}$	CRC E82, F111, F115

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-1,2,0,1)	magnetic moment	magnetic moment	magneton	$J \cdot T^{-1}$	CRC F111, F115
(-1,2,0,1)	magnetic moment	magnetic moment	nuclear magneton	$J \cdot T^{-1}$	CRC B228, E82
(-1,2,1,-2)	resistance	<i>i resistance</i>	capacitive reactance	Ω	M 15-3
(-1,2,1,-2)	resistance	resistance	electric resistance	Ω	CRC F134, F283, F313; M 1-18; MH 2416
(-1,2,1,-2)	resistance	impedance	impedance	Ω	CRC F104; M 15-3; Sz 58, 679
(-1,2,1,-2)	resistance	<i>i resistance</i>	inductive reactance	Ω	M 15-3
(-1,2,1,-2)	resistance	resistance	ohm	Ω	CRC F116, F134, F283, F313; M 1-18
(-1,2,1,-2)	resistance	<i>i resistance</i>	reactance	Ω	Sz 58, 678
(-1,2,1,-2)	resistance	resistance	resistance	Ω	AQ 28; CRC F122, F313; M 15-3
(-1,2,1,-1)	magnetic flux	magnetic flux	line (2)	Wb	CRC F353
(-1,2,1,-1)	magnetic flux	magnetic flux	magnetic flux	Wb	AQ 28; CRC F111, F134, F283, F313; M 1-18, 15-4; MH 2416
(-1,2,1,-1)	magnetic flux	magnetic flux	magnetic pole	Wb	CRC F111
(-1,2,1,-1)	magnetic flux	magnetic flux	magnetic pole strength	Wb	AQ 28
(-1,2,1,-1)	magnetic flux	magnetic flux	maxwell	Wb	CRC F112, F284, F340, F353
(-1,2,1,-1)	magnetic flux	magnetic flux	quantity of magnetism	Wb	CRC F111
(-1,2,1,-1)	magnetic flux	magnetic flux	unit pole	Wb	CRC F358; M 1-24, 15-4
(-1,2,1,-1)	magnetic flux	magnetic flux	weber	Wb	CRC F132, F134, F283, F313, F358; M 1-18; MH 2416

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(-1,2,1,0)	angular momentum	mo- work time	action	J·s	CRC F75
(-1,2,1,0)	angular momentum	mo- work time	action integral	J·s	AIP 42
(-1,2,1,0)	angular momentum	mo- angular momentum	angular momentum	J·s	AIP 42; CRC F77; M 3-52
(-1,2,1,0)	angular momentum	mo- angular momentum	moment of momentum	J·s	CRC F77; Sz 57, 674
(-1,2,1,0)	angular momentum	mo- angular momentum	spin	J·s	CRC B228, F126
(-1,3,0,0)	volume rate	flow volume flow	miner's inch	$\text{m}^3 \cdot \text{s}^{-1}$	M 1-16
(-1,3,0,0)	volume rate	flow recombination	recombination coefficient	$\text{m}^3 \cdot \text{s}^{-1}$	AIP 44
(-1,3,0,0)	volume rate	flow volume flow	volume flow	$\text{m}^3 \cdot \text{s}^{-1}$	CRC F363; M 3-52
(-1,3,1,-2)	resistivity	resistivity	resistivity	$\Omega \cdot \text{m}$	CRC B206, E95, F122; M 15-3; Sz 58, 678
(0,-4,1,0)	density gradient	density gradient	density gradient	$\text{kg} \cdot \text{m}^{-4}$	CRC F364
(0,-3,0,0)	volume number density	volume number density	acceptor number density	m^{-3}	AIP 39
(0,-3,0,0)	volume number density	molar concentration	concentration (2)	$\text{mol} \cdot \text{m}^{-3}$	AIP 38; CRC F87, F283; Sz 684
(0,-3,0,0)	volume number density	molar concentration	condosity	$\text{mol} \cdot \text{m}^{-3}$	CRC D271
(0,-3,0,0)	volume number density	volume number density	donor number density	m^{-3}	AIP 39
(0,-3,0,0)	volume number density	volume number density	electron number density	m^{-3}	AIP 39
(0,-3,0,0)	volume number density	volume number density	hole number density	m^{-3}	AIP 39
(0,-3,0,0)	volume number density	molar concentration	hydrogen ion concentration	$\text{mol} \cdot \text{m}^{-3}$	CRC F103

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference	
(0,-3,0,0)	volume number density	volume density	number	intrinsic number density	m^{-3}	AIP 39
(0,-3,0,0)	volume number density	volume density	number	ion number density	m^{-3}	Sz 59, 686
(0,-3,0,0)	volume number density	volume concentration		molarity	$\text{mol}\cdot\text{m}^{-3}$	CRC F113
(0,-3,0,0)	volume number density	volume concentration		normal	m^{-3}	CRC F115
(0,-3,0,0)	volume number density	volume density	number	number density of particles	m^{-3}	AIP 39
(0,-3,0,0)	volume number density	molar concentration		osmosity	$\text{mol}\cdot\text{m}^{-3}$	CRC D271
(0,-3,0,0)	volume number density	molar concentration		solubility (4)	$\text{mol}\cdot\text{m}^{-3}$	CRC D274
(0,-3,0,0)	volume number density	volume density	number	volume number density	m^{-3}	Wikipedia: number density
(0,-3,0,1)	electric density	charge	volume charge density	electric charge density	$\text{C}\cdot\text{m}^{-3}$	AIP 45; CRC F377
(0,-3,0,1)	electric density	charge	volume charge density	volume charge density	$\text{C}\cdot\text{m}^{-3}$	Sz 58, 677
(0,-3,1,0)	density		density	absolute density	$\text{kg}\cdot\text{m}^{-3}$	CRC F73
(0,-3,1,0)	density		density	absolute gravity	$\text{kg}\cdot\text{m}^{-3}$	CRC F73
(0,-3,1,0)	density		density	absolute humidity	$\text{kg}\cdot\text{m}^{-3}$	CRC F73
(0,-3,1,0)	density		density	active mass	$\text{kg}\cdot\text{m}^{-3}$	CRC F75
(0,-3,1,0)	density		density	density	$\text{kg}\cdot\text{m}^{-3}$	AIP 45; CRC E44, F66, F90, F283, F302, F364; M 1-18, 3-52; MH 2416
(0,-3,1,0)	density		concentration	dimensional concentration	$\text{kg}\cdot\text{m}^{-3}$	CRC F363, F365, F378
(0,-3,1,0)	density		density	humidity	$\text{kg}\cdot\text{m}^{-3}$	CRC F103
(0,-3,1,0)	density		density	mass density	$\text{kg}\cdot\text{m}^{-3}$	AIP 45
(0,-3,1,0)	density		concentration	mass transfer potential	$\text{kg}\cdot\text{m}^{-3}$	CRC F364

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,-3,1,0)	density	mass solubility	solubility (2)	$\text{kg}\cdot\text{m}^{-3}$	CRC B68
(0,-3,1,0)	density	density	x-ray density	$\text{kg}\cdot\text{m}^{-3}$	CRC D38
(0,-2,-1,2)	reluctance	reluctance	reluctance	H^{-1}	AQ 28; CRC F122; M 15-4; Sz 58, 679
(0,-2,0,0)	area number density	area number density	area number density	m^{-2}	Wikipedia: number density
(0,-2,0,0)	area number density	particles per area	fluence	m^{-2}	CRC F360; Sz 59, 688
(0,-2,0,0)	area number density	fuel efficiency	mpg	m^{-2}	CRC F354
(0,-2,0,0)	area number density	particles per area	particle fluence	m^{-2}	Sz 59, 688
(0,-2,0,1)	electric density	flux	electric polarization	$\text{C}\cdot\text{m}^{-2}$	CRC F91
(0,-2,0,1)	electric density	flux	charge per area	$\text{C}\cdot\text{m}^{-2}$	AIP 41
(0,-2,0,1)	electric density	flux	electric flux density	$\text{C}\cdot\text{m}^{-2}$	AQ 28; Sz 58, 680
(0,-2,0,1)	electric density	flux	electric polarization	$\text{C}\cdot\text{m}^{-2}$	AIP 43
(0,-2,0,1)	electric density	flux	electric polarization	$\text{C}\cdot\text{m}^{-2}$	AIP 43; AQ 28
(0,-2,0,1)	electric density	flux	charge per area	$\text{C}\cdot\text{m}^{-2}$	AIP 46; CRC F127, F303; Sz 58, 677
(0,-2,1,0)	area density	area density	area density	$\text{kg}\cdot\text{m}^{-2}$	Sz 57, 672
(0,-2,1,0)	area density	area density	hardness (2)	$\text{kg}\cdot\text{m}^{-2}$	CRC D38
(0,-2,1,0)	area density	surface concentration	surface concentration	$\text{kg}\cdot\text{m}^{-2}$	CRC F365
(0,-1,-1,2)	reluctivity	reluctivity	reluctivity	$\text{m}\cdot\text{H}^{-1}$	CRC F122; M 15-4
(0,-1,0,0)	linear number density	wave number	angular wave number	m^{-1}	AIP 38
(0,-1,0,0)	linear number density	linear number density	angular wave vector	m^{-1}	AIP 39

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,-1,0,0)	linear number density	attenuation	attenuation factor	m^{-1}	AIP 44
(0,-1,0,0)	linear number density	linear number density	fine structure separation	m^{-1}	CRC E65
(0,-1,0,0)	linear number density	wave number	kayser	m^{-1}	M 1-22
(0,-1,0,0)	linear number density	attenuation	linear attenuation coefficient	m^{-1}	AIP 45; CRC F73; Sz 59, 686
(0,-1,0,0)	linear number density	linear number density	linear number density	m^{-1}	Wikipedia: number density
(0,-1,0,0)	linear number density	area per volume	macroscopic cross section	m^{-1}	AIP 47
(0,-1,0,0)	linear number density	wave number	propagation vector	m^{-1}	AIP 39
(0,-1,0,0)	linear number density	reciprocal length	reciprocal lattice vector	m^{-1}	AIP 41
(0,-1,0,0)	linear number density	plane angle per distance	rotary power	$rad \cdot m^{-1}$	CRC E424, F123
(0,-1,0,0)	linear number density	plane angle per distance	specific rotation (2)	$rad \cdot m^{-1}$	CRC E424
(0,-1,0,0)	linear number density	volumetric cooling area	volumetric cooling area	m^{-1}	CRC F363
(0,-1,0,0)	linear number density	wave number	wave number	m^{-1}	AIP 46; CRC F132; M 1-18; Sz 57, 675, 681
(0,-1,0,0)	linear number density	wave number	wave vector	m^{-1}	AIP 46
(0,-1,1,0)	linear density	linear density	denier	$kg \cdot m^{-1}$	CRC F349
(0,-1,1,0)	linear density	linear density	tex	$kg \cdot m^{-1}$	CRC F358; Sz 60, 689
(0,0,-1,0)	mass concentration	specific heat capacity	heat capacity (3)	$J \cdot kg^{-1} \cdot K^{-1}$	CRC F363
(0,0,-1,0)	mass concentration	heat capacity (c)	humid heat	kg^{-1}	CRC F363, F364
(0,0,-1,0)	mass concentration	mass concentration	molality	$mol \cdot kg^{-1}$	AIP 39; CRC F113; Sz 59, 684

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,0,-1,0)	mass concentration	mass concentration	osmolality	$\text{mol}\cdot\text{kg}^{-1}$	CRC D271
(0,0,-1,0)	mass concentration	per mass	specific entropy	kg^{-1}	Sz 57, 674
(0,0,-1,0)	mass concentration	specific heat (b)	specific heat (3)	$\text{J}\cdot\text{kg}^{-1}\cdot\text{K}^{-1}$	CRC D174, D180, D181, E106, F10, F363
(0,0,-1,0)	mass concentration	specific heat capacity	specific heat capacity	$\text{J}\cdot\text{kg}^{-1}\cdot\text{K}^{-1}$	AIP 38; CRC B205, E16, F64, F102, F302; M 1-18
(0,0,-1,0)	mass concentration	molar specific heat	specific molar heat capacity	$\text{J}\cdot\text{kg}^{-1}\cdot\text{mol}^{-1}\cdot\text{K}^{-1}$	CRC D175, F363
(0,0,-1,0)	mass concentration	per mass	thermal capacity	kg^{-1}	CRC D173, F102, F128
(0,0,-1,1)	exposure	exposure	exposure	$\text{C}\cdot\text{kg}^{-1}$	AIP 44; CRC F316, F360
(0,0,-1,1)	exposure	magneton per angular momentum	gyromagnetic ratio	$\text{s}^{-1}\cdot\text{T}^{-1}$	AIP 44
(0,0,-1,1)	exposure	exposure	roentgen	$\text{C}\cdot\text{kg}^{-1}$	CRC F123, F284, F357, F360; M 1-24; Sz 62, 692
(0,0,0,-2)	lorenz coefficient	lorenz coefficient	lorenz coefficient	$\text{V}^2\cdot\text{K}^{-2}$	AIP 42
(0,0,0,-1)	thermoelectric power	thermoelectric power	seebeck coefficient	$\text{V}\cdot\text{K}^{-1}$	AIP 43
(0,0,0,-1)	thermoelectric power	specific heat of electricity	specific heat of electricity	$\text{J}\cdot\text{C}^{-1}\cdot\text{K}^{-1}$	CRC F129 (vector)
(0,0,0,-1)	thermoelectric power	thermoelectric power	thermoelectric power	$\text{V}\cdot\text{K}^{-1}$	CRC F128
(0,0,0,0)	number	ratio	abbe number	1	CRC F73
(0,0,0,0)	number	chemical activity	absolute activity	1	AIP 45; CRC F291
(0,0,0,0)	number	ratio	absolute specific gravity	1	CRC F73
(0,0,0,0)	number	ratio	absorptance	1	AIP 44; CRC F73, E210

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,0,0,0)	number	absorption	absorption coefficient	1	CRC F73
(0,0,0,0)	number	ratio	absorption cross-section (1)	1	CRC F73
(0,0,0,0)	number	ratio	absorption factor	1	AIP 44; CRC F73
(0,0,0,0)	number	ratio	acetone number	1	CRC F74
(0,0,0,0)	number	ratio	acoustic absorption coefficient	1	CRC F73
(0,0,0,0)	number	chemical activity	activity coefficient	1	AIP 38
(0,0,0,0)	number	ratio	albedo	1	CRC F75
(0,0,0,0)	number	ratio	alfven number	1	CRC F76
(0,0,0,0)	number	quantity	amount of substance	mol	AIP 39; CRC F282, F311; M 1-18; MH 2415
(0,0,0,0)	number	plane angle	angle	rad	CRC F313
(0,0,0,0)	number	plane angle	angular displacement	rad	CRC F77
(0,0,0,0)	number	ratio	aperture ratio	1	CRC F78
(0,0,0,0)	number	ratio	atomic heat capacity	J·K ⁻¹	CRC F79
(0,0,0,0)	number	quantity	atomic number	1	AIP 44; CRC F79
(0,0,0,0)	number	plane angle	azimuth	rad	CRC F80
(0,0,0,0)	number	acoustic loudness	bel	Np	CRC F81
(0,0,0,0)	number	plane angle	bragg angle	rad	AIP 45
(0,0,0,0)	number	ratio	bulk strain	1	CRC F318
(0,0,0,0)	number	plane angle	circumference	rad	CRC F348; M 1-17
(0,0,0,0)	number	ratio	concentration (1)	1	CRC F363, F365, F378
(0,0,0,0)	number	acoustic loudness	decibel	Np	CRC F89, F349; M 12-136

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,0,0,0)	number	plane angle	declination	rad	CRC F90
(0,0,0,0)	number	plane angle	degree	rad	CRC F90, F284, F349; M 1-17
(0,0,0,0)	number	ratio	degree API	1	M 1-29
(0,0,0,0)	number	ratio	degree baume	1	CRC F3, F80; M 1-29
(0,0,0,0)	number	ratio	degree twaddle	1	CRC F3
(0,0,0,0)	number	ratio	diffraction efficiency	1	CRC F91
(0,0,0,0)	number	ratio	diffusion tortuosity	1	CRC F364
(0,0,0,0)	number	plane angle	dip	rad	CRC F91
(0,0,0,0)	number	ratio	electric susceptibility	1	AIP 46; Wikipedia
(0,0,0,0)	number	ratio	elongation	1	CRC F95
(0,0,0,0)	number	ratio	emissivity	1	AIP 44; CRC E209, F95
(0,0,0,0)	number	ratio	emittance (2)	1	CRC F95
(0,0,0,0)	number	ratio	entropy	J·K ⁻¹	AIP 43; CRC F65; M 1-18; Sz 57, 674
(0,0,0,0)	number	chemical activity	equilibrium constant	1	AIP 42
(0,0,0,0)	number	ratio	f number	1	CRC F99
(0,0,0,0)	number	ratio	friction coefficient	1	CRC F16, F100
(0,0,0,0)	number	ratio	g-factor	kg·s ⁻¹ ·C ⁻¹ ·T ⁻¹	AIP 38
(0,0,0,0)	number	plane angle	gon	rad	CRC F350
(0,0,0,0)	number	plane angle	grade	rad	M 1-22
(0,0,0,0)	number	ratio	heat capacity (2)	J·K ⁻¹	AIP 41; CRC F102; Sz 57, 674
(0,0,0,0)	number	ratio	heat capacity (4)	J·mol ⁻¹ ·K ⁻¹	CRC B211, D176

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,0,0,0)	number	quantity	hydrogen equivalent	mol^{-1}	CRC F103
(0,0,0,0)	number	ratio	index of refraction	1	CRC F105
(0,0,0,0)	number	ratio	iodine number	1	CRC F106
(0,0,0,0)	number	quantity	ionic charge number	1	AIP 40
(0,0,0,0)	number	ratio	linear strain	1	AIP 38
(0,0,0,0)	number	acoustic loudness	logarithmic decrement	Np	AIP 46; CRC F317
(0,0,0,0)	number	plane angle	loss angle	rad	AIP 44
(0,0,0,0)	number	acoustic loudness	loudness level	Np	AIP 42
(0,0,0,0)	number	ratio	luminous efficacy	$\text{lm}\cdot\text{W}^{-1}$	AIP 42; CRC E210
(0,0,0,0)	number	ratio	luminous efficiency	1	CRC E210
(0,0,0,0)	number	ratio	mach number	1	CRC F110
(0,0,0,0)	number	quantum number	magnetic quantum number	1	AIP 39
(0,0,0,0)	number	ratio	magnetic susceptibility (1)	1	AIP 46; Wikipedia
(0,0,0,0)	number	ratio	magnifying power	1	CRC F112
(0,0,0,0)	number	ratio	mass fraction	1	AIP 40; Sz 685
(0,0,0,0)	number	quantity	mass number	1	AIP 40; CRC F112
(0,0,0,0)	number	plane angle	minute (1)	rad	CRC F113, F284, F354; M 1-17
(0,0,0,0)	number	ratio	mobility ratio	1	AIP 38
(0,0,0,0)	number	ratio	moisture content	1	CRC F363
(0,0,0,0)	number	ratio	molar entropy	$\text{J}\cdot\text{mol}^{-1}\cdot\text{K}^{-1}$	CRC F283; Sz 59, 684
(0,0,0,0)	number	ratio	molar fraction	1	AIP 40

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,0,0,0)	number	ratio	molar heat capacity	$\text{J}\cdot\text{mol}^{-1}\cdot\text{K}^{-1}$	CRC F102, F283, F302; Sz 59, 684
(0,0,0,0)	number	ratio	molar ratio	1	AIP 40
(0,0,0,0)	number	quantity	mole	mol	CRC F113, F282; M 1-18; MH 2415
(0,0,0,0)	number	ratio	mole fraction	1	CRC F113, F379; Sz 685
(0,0,0,0)	number	ratio	monochromatic emissive power	1	CRC F114
(0,0,0,0)	number	ratio	n-unit	1	CRC F121
(0,0,0,0)	number	acoustic loudness	neper	Np	CRC F354
(0,0,0,0)	number	quantity	neutron number	1	AIP 42; CRC F114
(0,0,0,0)	number	quantum number	nuclear spin quantum number	1	AIP 42
(0,0,0,0)	number	quantity	nucleon number	1	AIP 40; CRC F115
(0,0,0,0)	number	resolving power	numerical aperture	1	CRC F115
(0,0,0,0)	number	ratio	nusselt number	1	CRC F115
(0,0,0,0)	number	quantum number	orbital angular momentum quantum number	1	AIP 39
(0,0,0,0)	number	quantity	order of reflection	1	AIP 39
(0,0,0,0)	number	ratio	osmotic coefficient	1	CRC F294
(0,0,0,0)	number	ratio	packing fraction	1	CRC F117
(0,0,0,0)	number	plane angle	parallax	rad	CRC F117
(0,0,0,0)	number	plane angle	phase angle	rad	CRC F118
(0,0,0,0)	number	plane angle	phase difference	rad	AIP 46
(0,0,0,0)	number	plane angle	plane angle	rad	AIP 44; CRC F283, F313; M 1-18

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,0,0,0)	number	ratio	poisson ratio	1	AIP 45; CRC F64
(0,0,0,0)	number	ratio	porosity	1	CRC F363
(0,0,0,0)	number	ratio	ppm	1	CRC F355
(0,0,0,0)	number	quantum number	principal quantum number	1	AIP 39
(0,0,0,0)	number	plane angle	quadrant	rad	CRC F356; M 1-17
(0,0,0,0)	number	plane angle	radian	rad	CRC F120, F283, F357; M 1-18
(0,0,0,0)	number	ratio	rayleigh number	1	CRC F121
(0,0,0,0)	number	ratio	reflectance	1	CRC E210
(0,0,0,0)	number	ratio	reflection coefficient	1	CRC F121
(0,0,0,0)	number	ratio	reflectivity	1	CRC F121
(0,0,0,0)	number	ratio	refractive index	1	AIP 39; CRC F105
(0,0,0,0)	number	ratio	refractivity	1	CRC F105, F121
(0,0,0,0)	number	chemical activity	relative activity	1	CRC F292
(0,0,0,0)	number	ratio	relative atomic mass	1	AIP 40
(0,0,0,0)	number	chemical activity	relative chemical activity	1	AIP 37
(0,0,0,0)	number	ratio	relative density	1	AIP 38
(0,0,0,0)	number	ratio	relative elongation	1	CRC F317
(0,0,0,0)	number	ratio	relative humidity	1	CRC F122
(0,0,0,0)	number	ratio	relative molar mass	mol	AIP 42
(0,0,0,0)	number	ratio	relative molecular mass	1	AIP 42
(0,0,0,0)	number	ratio	relative permeability	1	AIP 45

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,0,0,0)	number	ratio	relative permissivity	1	AIP 42
(0,0,0,0)	number	plane angle	revolution	rad	CRC F357
(0,0,0,0)	number	plane angle	right angle	rad	CRC F357
(0,0,0,0)	number	quantum number	rotational quantum number	1	AIP 42
(0,0,0,0)	number	plane angle	scattering angle	rad	AIP 45
(0,0,0,0)	number	plane angle	second (1)	rad	CRC F124, F284, F357
(0,0,0,0)	number	plane angle	shear strain	rad	AIP 44
(0,0,0,0)	number	solid angle	solid angle	sr	AIP 46; CRC F125, F283, F313; M 1-18
(0,0,0,0)	number	ratio	solubility (3)	1	CRC C707
(0,0,0,0)	number	acoustic loudness	sound power level	Np	AIP 42
(0,0,0,0)	number	acoustic loudness	sound pressure level	Np	AIP 42; M 12-136; Sz 58, 682
(0,0,0,0)	number	ratio	specific gravity	1	CRC F125, F364
(0,0,0,0)	number	ratio	specific heat (2)	1	CRC F125
(0,0,0,0)	number	ratio	specific inductive capacity	1	CRC F126
(0,0,0,0)	number	ratio	specific mass content	1	CRC F363
(0,0,0,0)	number	solid angle	sphere	sr	CRC F357
(0,0,0,0)	number	quantum number	spin quantum number	1	AIP 40
(0,0,0,0)	number	solid angle	square degree	sr	CRC F357
(0,0,0,0)	number	ratio	standard entropy	J·mol ⁻¹ ·K ⁻¹	CRC B211
(0,0,0,0)	number	solid angle	steradian	sr	CRC F126, F283, F313, F358; M 1-18

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,0,0,0)	number	quantity	stoichiometric number of substance	1	AIP 45
(0,0,0,0)	number	ratio	strain	1	CRC F127
(0,0,0,0)	number	ratio	strain tensor	1	AIP 44
(0,0,0,0)	number	ratio	surface emissivity	1	CRC F363
(0,0,0,0)	number	ratio	thermal diffusion factor	1	AIP 44
(0,0,0,0)	number	ratio	thermal diffusion ratio	1	AIP 38
(0,0,0,0)	number	quantum number	total angular momentum quantum number	1	AIP 38
(0,0,0,0)	number	ratio	transmissibility	1	CRC E422
(0,0,0,0)	number	ratio	transmittance	1	CRC E210
(0,0,0,0)	number	quantum number	vibrational quantum number	1	AIP 40
(0,0,0,0)	number	ratio	visibility	$\text{lm}\cdot\text{W}^{-1}$	CRC F131
(0,0,0,0)	number	ratio	voidage	1	CRC F363
(0,0,0,0)	number	ratio	volume fraction	1	AIP 46; Sz 685
(0,0,0,0)	number	ratio	volume magnetic susceptibility	1	AIP 46; Wikipedia
(0,0,0,1)	electric charge	electric charge	ampere hour	C	CRC F76, F346
(0,0,0,1)	electric charge	electric charge	charge of particle	C	CRC F329
(0,0,0,1)	electric charge	electric charge	coulomb	C	CRC F88, F134, F283, F348; M 1-18; MH 2415
(0,0,0,1)	electric charge	electric charge	electric charge	C	AIP 39; CRC F134, F283, F313; MH 2415

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,0,0,1)	electric charge	electric charge	electric flux (2)	C	AIP 47; AQ 28; Sz 58, 680
(0,0,0,1)	electric charge	molar charge	electric faraday constant	C·mol ⁻¹	CRC F98; M 1-21
(0,0,0,1)	electric charge	electric charge	franklin	C	CRC F350
(0,0,0,1)	electric charge	electric charge	quantity of electricity	C	AIP 43; CRC F134, F215, F283, F313; M 1-18, 15-3
(0,0,1,-1)	electrochemical equivalent	electrochemical equivalent	electrochemical equivalent	kg·C ⁻¹	CRC F94
(0,0,1,0)	mass	mass	amu	kg	AIP 39; CRC F285
(0,0,1,0)	mass	mass	assay ton	kg	M 1-17
(0,0,1,0)	mass	mass	atomic mass	kg	AIP 39
(0,0,1,0)	mass	mass	carat	kg	CRC F347; M 1-17
(0,0,1,0)	mass	mass	cental	kg	CRC F347; M 1-17
(0,0,1,0)	mass	mass per valence	combining weight	kg	CRC F86
(0,0,1,0)	mass	mass	dalton	kg	CRC F89
(0,0,1,0)	mass	mass	dram (2)	kg	CRC F349; M 1-17
(0,0,1,0)	mass	mass	effective mass	kg	AIP 39
(0,0,1,0)	mass	mass per valence	equivalent weight	kg	CRC F96
(0,0,1,0)	mass	mass	gamma (1)	kg	CRC F350; Sz 61
(0,0,1,0)	mass	mass	geepound	kg	CRC F350
(0,0,1,0)	mass	mass	grain	kg	CRC F350; M 1-17; MH 2419
(0,0,1,0)	mass	mass	gram	kg	CRC F101, F351; MH 2419
(0,0,1,0)	mass	mass	hundredweight	kg	CRC F351; M 1-17; MH 2419
(0,0,1,0)	mass	mass	inertia	kg	CRC F105

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,0,1,0)	mass	mass	kilogram	kg	CRC F108, F282, F352; M 1-18; MH 2415
(0,0,1,0)	mass	mass	long ton	kg	M 1-17
(0,0,1,0)	mass	mass	mass	kg	AIP 39; CRC F112, F282; M 1-18, 3-52; MH 2415
(0,0,1,0)	mass	binding energy	mass decrement	kg	CRC F112
(0,0,1,0)	mass	binding energy	mass defect	kg	CRC F112
(0,0,1,0)	mass	molar mass	molar mass	kg·mol ⁻¹	AIP 42; CRC F302; Sz 59, 683
(0,0,1,0)	mass	mass	molecular weight	kg	CRC F113
(0,0,1,0)	mass	mass	nuclear mass	kg	AIP 39
(0,0,1,0)	mass	mass	ounce (2)	kg	CRC F355; M 1-17; MH 2419
(0,0,1,0)	mass	mass	pennyweight	kg	CRC F355; M 1-17
(0,0,1,0)	mass	mass	pound	kg	CRC F284, F356; M 1-17; MH 2420
(0,0,1,0)	mass	mass	quarter (2)	kg	CRC F357; M 1-17
(0,0,1,0)	mass	mass	quintal	kg	CRC F357
(0,0,1,0)	mass	mass	reduced mass	kg	AIP 39
(0,0,1,0)	mass	mass	scruple (2)	kg	CRC F357; M 1-17
(0,0,1,0)	mass	mass	short ton	kg	M 1-17
(0,0,1,0)	mass	mass	slug	kg	CRC F357; M 3-52; MH 2420
(0,0,1,0)	mass	mass	stone	kg	CRC F358; M 1-17
(0,0,1,0)	mass	mass	ton (2)	kg	CRC F358; M 1-24; MH 2420
(0,0,1,0)	mass	mass	tonne	kg	CRC F113, F284, F358; MH 2420
(0,1,-1,0)	specific length	specific length	typp	m·kg ⁻¹	Webster's

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,1,0,0)	distance	distance	angstrom	m	CRC F284, F315, F346
(0,1,0,0)	distance	distance	astronomical unit	m	CRC F78, F346
(0,1,0,0)	distance	distance	barleycorn	m	CRC F346
(0,1,0,0)	distance	distance	bolt	m	CRC F346
(0,1,0,0)	distance	distance	bond length	m	CRC F82
(0,1,0,0)	distance	distance	breadth	m	AIP 38
(0,1,0,0)	distance	distance	burgers vector	m	AIP 38
(0,1,0,0)	distance	distance	cable length	m	CRC F347; M 1-16
(0,1,0,0)	distance	distance	caliber	m	CRC F347
(0,1,0,0)	distance	distance	chain	m	CRC F348; M 1-16
(0,1,0,0)	distance	distance	coherence length	m	AIP 45; CRC F86
(0,1,0,0)	distance	distance	compton wavelength	m	AIP 45; CRC F87
(0,1,0,0)	distance	distance	cubit	m	CRC F349
(0,1,0,0)	distance	distance	debroglie wavelength	m	CRC F89
(0,1,0,0)	distance	distance	debye length	m	CRC F89
(0,1,0,0)	distance	distance	diameter	m	AIP 38; CRC F363
(0,1,0,0)	distance	distance	displacement	m	CRC F92
(0,1,0,0)	distance	distance	displacement vector	m	AIP 40
(0,1,0,0)	distance	distance	distance	m	AIP 38; CRC F363
(0,1,0,0)	distance	distance	ell	m	CRC F349
(0,1,0,0)	distance	distance	fathom	m	CRC F349; M 1-16; MH 2417
(0,1,0,0)	distance	distance	fermi	m	CRC F98, F315, F349; M 1-21
(0,1,0,0)	distance	distance	fluid head	m	CRC F363

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,1,0,0)	distance	distance	foot	m	CRC F349; M 1-16; MH 2417
(0,1,0,0)	distance	distance	furlong	m	CRC F350; M 1-16
(0,1,0,0)	distance	distance	gunter's chain	m	M 1-16
(0,1,0,0)	distance	distance	hand	m	CRC F351; M 1-16
(0,1,0,0)	distance	distance	height	m	AIP 38; CRC F363
(0,1,0,0)	distance	distance	inch	m	CRC F284, F351; M 1-16; MH 2417
(0,1,0,0)	distance	distance	ion size	m	CRC F106
(0,1,0,0)	distance	distance	ionic radius	m	CRC F106
(0,1,0,0)	distance	distance	land mile	m	CRC F126
(0,1,0,0)	distance	distance	lattice plane spacing	m	AIP 38
(0,1,0,0)	distance	distance	lattice vector	m	AIP 43
(0,1,0,0)	distance	distance	league	m	CRC F353; M 1-16
(0,1,0,0)	distance	distance	length	m	AIP 39; CRC F109, F282, F363; M 1-18, 3-52; MH 2415
(0,1,0,0)	distance	distance	light year	m	CRC F109, F353
(0,1,0,0)	distance	distance	line (1)	m	CRC F353
(0,1,0,0)	distance	distance	link	m	CRC F353; M 1-16
(0,1,0,0)	distance	distance	london penetration depth	m	AIP 45
(0,1,0,0)	distance	distance	mean free path	m	AIP 39; CRC F364; Sz 59, 687
(0,1,0,0)	distance	distance	meter	m	CRC F112, F282, F353; M 1-18; MH 2415
(0,1,0,0)	distance	distance	micron	m	CRC F113, F354
(0,1,0,0)	distance	distance	mil	m	CRC F354
(0,1,0,0)	distance	distance	mile	m	CRC F354; M1-16; MH 2417

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,1,0,0)	distance	distance	nail	m	CRC F354
(0,1,0,0)	distance	distance	nautical mile	m	M1-16; Sz 60, 689
(0,1,0,0)	distance	distance	pace	m	CRC F355
(0,1,0,0)	distance	distance	palm	m	CRC F355
(0,1,0,0)	distance	distance	parsec	m	CRC F117, F355; M 1-23
(0,1,0,0)	distance	distance	particle displacement	m	AIP 45
(0,1,0,0)	distance	distance	path length	m	AIP 40
(0,1,0,0)	distance	distance	perch (1)	m	CRC F355; M 1-16
(0,1,0,0)	distance	distance	pica	m	CRC F355; M 1-23
(0,1,0,0)	distance	distance	point	m	CRC F356; M 1-24
(0,1,0,0)	distance	distance	pole	m	CRC F356; M 1-16
(0,1,0,0)	distance	distance	position vector	m	AIP 40
(0,1,0,0)	distance	distance	radius	m	AIP 40
(0,1,0,0)	distance	distance	radius of gyration	m	CRC F121
(0,1,0,0)	distance	distance	range	m	AIP 43
(0,1,0,0)	distance	distance	rod	m	CRC F357; M 1-16; MH 2417
(0,1,0,0)	distance	distance	rope	m	CRC F357
(0,1,0,0)	distance	distance	scale height	m	CRC F123
(0,1,0,0)	distance	distance	siegbahn	m	AQ 21
(0,1,0,0)	distance	distance	span	m	CRC F357; M 1-16
(0,1,0,0)	distance	distance	statute mile	m	CRC F126
(0,1,0,0)	distance	distance	thickness	m	AIP 38
(0,1,0,0)	distance	distance	thou	m	CRC F358
(0,1,0,0)	distance	distance	vara	m	M 1-16

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,1,0,0)	distance	distance	wavelength	m	AIP 45; CRC F132
(0,1,0,0)	distance	distance	x-unit	m	CRC F132, F359
(0,1,0,0)	distance	distance	yard	m	CRC F359; M 1-16; MH 2417
(0,1,0,1)	electric moment	electric dipole moment	debye	C·m	CRC E59, F285
(0,1,0,1)	electric moment	electric dipole moment	electric dipole moment	C·m	AIP 39; AQ 28; CRC E59, F91, F285; Sz 58, 680
(0,1,1,-2)	magnetic permeability	magnetic permeability	magnetic permeability	H·m ⁻¹	CRC F111, F364, F377
(0,1,1,-2)	magnetic permeability	magnetic permeability	magnetic susceptibility (2)	H·m ⁻¹	CRC F127
(0,1,1,-2)	magnetic permeability	magnetic permeability	permeability (1)	H·m ⁻¹	AIP 45; CRC F215; M 15-4; Sz 58, 681
(0,2,-1,0)	specific area	mass attenuation	mass attenuation coefficient	m ² ·kg ⁻¹	AIP 45; CRC F360; Sz 59
(0,2,-1,0)	specific area	mass attenuation	mass energy absorption coefficient	m ² ·kg ⁻¹	CRC F360
(0,2,-1,0)	specific area	mass energy transfer	mass energy transfer coefficient	m ² ·kg ⁻¹	CRC F360
(0,2,-1,0)	specific area	polarization rotation	specific rotation (1)	rad·m ² ·kg ⁻¹	CRC C705, F126
(0,2,0,0)	area	cross section	absorption cross-section (2)	m ²	CRC F73
(0,2,0,0)	area	area	acre	m ²	CRC F346; M 1-16; MH 2417
(0,2,0,0)	area	area	are	m ²	CRC F346; M 1-19
(0,2,0,0)	area	area	area	m ²	AIP 40; CRC F77, F283, F363; M 1-18, 3-52; MH 2416
(0,2,0,0)	area	atomic attenuation	atomic attenuation coefficient	m ²	AIP 45; Sz 59

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,2,0,0)	area	cross section	barn	m ²	CRC F80, F284, F315, F346; M 1-19
(0,2,0,0)	area	area	circular inch	m ²	CRC F348; M 1-16
(0,2,0,0)	area	area	circular mil	m ²	CRC F85, F348; M 1-16
(0,2,0,0)	area	cross section	cross section	m ²	AIP 46; CRC F284
(0,2,0,0)	area	hydrodynamic permeability	darcy	m ²	CRC F349
(0,2,0,0)	area	cross section	extinction cross section	m ²	CRC F97, F123
(0,2,0,0)	area	area	hectare	m ²	CRC F351; MH 2417
(0,2,0,0)	area	hydrodynamic permeability	permeability (2)	m ²	CRC F364
(0,2,0,0)	area	area	rood	m ²	CRC F357
(0,2,0,0)	area	cross section	scattering cross section	m ²	CRC F123
(0,2,0,0)	area	area	section	m ²	M 1-16, 1-24
(0,2,0,0)	area	area	square chain	m ²	CRC F357
(0,2,0,0)	area	area	square foot	m ²	CRC F357
(0,2,0,0)	area	area	square inch	m ²	CRC F357
(0,2,0,0)	area	area	square link	m ²	CRC F357
(0,2,0,0)	area	area	square meter	m ²	CRC F357
(0,2,0,0)	area	area	square mile	m ²	CRC F357
(0,2,0,0)	area	area	square perch	m ²	M 1-16
(0,2,0,0)	area	area	square rod	m ²	CRC F357
(0,2,0,0)	area	area	square yard	m ²	CRC F357
(0,2,0,0)	area	area	township	m ²	CRC F358; M 1-24
(0,2,0,1)	quadrupole moment	electric quadrupole moment	electric quadrupole moment	C·m ²	CRC E82*

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,2,0,1)	quadrupole moment	electric quadrupole moment	quadrupole moment	C·m ²	AIP 43*
(0,2,1,-2)	inductance	inductance	henry	H	CRC F103, F134, F283, F313; M 1-18; MH 2416
(0,2,1,-2)	inductance	inductance	inductance	H	AQ 28; CRC F134, F283, F313; M 1-18; MH 2416
(0,2,1,-2)	inductance	magnetic permeance	magnetic permeance	H	Sz 58, 679
(0,2,1,-2)	inductance	inductance	mutual inductance	H	AIP 42; M 15-3
(0,2,1,-2)	inductance	magnetic permeance	permeance	H	AQ 28; M 15-4
(0,2,1,-2)	inductance	inductance	self-inductance	H	AIP 42
(0,2,1,0)	angular inertia	angular inertia	angular inertia	kg·m ²	CRC F77
(0,2,1,0)	angular inertia	angular inertia	moment of inertia	kg·m ²	AIP 41; CRC F114; M 3-52; Sz 57, 673
(0,3,-1,0)	specific volume	mass capacity	mass capacity	m ³ ·kg ⁻¹	CRC F363, F365
(0,3,-1,0)	specific volume	specific volume	solubility (1)	m ³ ·kg ⁻¹	CRC B457
(0,3,-1,0)	specific volume	specific volume	specific volume	m ³ ·kg ⁻¹	CRC F126, F302; M 3-52
(0,3,0,-1)	hall coefficient	hall coefficient	hall coefficient	m ³ ·C ⁻¹	AIP 40, CRC F303
(0,3,0,0)	volume	volume	acre foot	m ³	CRC F346
(0,3,0,0)	volume	molar volume	atomic volume	m ³ ·mol ⁻¹	CRC B209
(0,3,0,0)	volume	volume	bag	m ³	CRC F346
(0,3,0,0)	volume	volume	barrel	m ³	CRC F346
(0,3,0,0)	volume	volume	board foot	m ³	CRC F346; M 1-17
(0,3,0,0)	volume	volume	bucket	m ³	CRC F347
(0,3,0,0)	volume	volume	bushel	m ³	CRC F347; M 1-16
(0,3,0,0)	volume	volume	butt	m ³	CRC F347
(0,3,0,0)	volume	volume	cord	m ³	CRC F348; M 1-16

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,3,0,0)	volume	volume	cubic foot	m ³	CRC F348
(0,3,0,0)	volume	volume	cubic inch	m ³	CRC F348
(0,3,0,0)	volume	volume	cubic meter	m ³	CRC F349
(0,3,0,0)	volume	volume	cubic yard	m ³	CRC F349
(0,3,0,0)	volume	volume	cup	m ³	CRC F349
(0,3,0,0)	volume	volume	drachm	m ³	CRC F349; M 1-16
(0,3,0,0)	volume	volume	dram (1)	m ³	CRC F349; M 1-16
(0,3,0,0)	volume	volume	firkin	m ³	CRC F349
(0,3,0,0)	volume	volume	gallon	m ³	CRC F350; M 1-16; MH 2418
(0,3,0,0)	volume	volume	gill	m ³	CRC F350; M 1-16
(0,3,0,0)	volume	volume	hogshead	m ³	CRC F351
(0,3,0,0)	volume	volume	kilderkin	m ³	CRC F352
(0,3,0,0)	volume	volume	last	m ³	CRC F353
(0,3,0,0)	volume	volume	liter	m ³	CRC F284, F353; MH 2418
(0,3,0,0)	volume	volume	minim (2)	m ³	CRC F354
(0,3,0,0)	volume	molar volume	molar volume	m ³ ·mol ⁻¹	CRC F113, F302; Sz 59, 684
(0,3,0,0)	volume	volume	noggin	m ³	CRC F355
(0,3,0,0)	volume	volume	ounce (1)	m ³	CRC F355; M 1-16
(0,3,0,0)	volume	volume	peck	m ³	CRC F355; M 1-16
(0,3,0,0)	volume	volume	perch (2)	m ³	M 1-16
(0,3,0,0)	volume	volume	pint	m ³	CRC F355; M 1-16
(0,3,0,0)	volume	polarizability	polarizability	m ³	CRC E70, E72, E74
(0,3,0,0)	volume	volume	pottle	m ³	CRC F356
(0,3,0,0)	volume	volume	puncheon	m ³	CRC F356
(0,3,0,0)	volume	volume	quart	m ³	CRC F356; M 1-16

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(0,3,0,0)	volume	volume	quarter (1)	m^3	CRC F357
(0,3,0,0)	volume	volume	register ton	m^3	CRC F357; M 1-17
(0,3,0,0)	volume	volume	scruple (1)	m^3	CRC F357
(0,3,0,0)	volume	volume	seam	m^3	CRC F357
(0,3,0,0)	volume	section modulus	section modulus	m^3	M 1-22; MH 2421
(0,3,0,0)	volume	volume	standard	m^3	CRC F358
(0,3,0,0)	volume	volume	stere	m^3	CRC F358; M 1-24; Sz 61, 690
(0,3,0,0)	volume	volume	tablespoon	m^3	CRC F358
(0,3,0,0)	volume	volume	teaspoon	m^3	CRC F358
(0,3,0,0)	volume	volume	ton (1)	m^3	M 1-24
(0,3,0,0)	volume	volume	volume	m^3	AIP 40; CRC F132, F283, F363; M 1-18, 3-52; MH 2416
(0,4,0,0)	moment of section	moment of section	moment of section	m^4	M 1-21; MH 2421
(0,4,0,0)	moment of section	moment of section	second moment of area	m^4	Sz 57, 675
(1,-3,-1,2)	conductivity	volume conductivity	conductivity	$\text{S}\cdot\text{m}^{-1}$	AIP 44; CRC E63, F87, F364; M 15-3; Sz 58
(1,-3,-1,2)	conductivity	conductivity	electrolytic conductivity	$\text{S}\cdot\text{m}^{-1}$	AIP 45
(1,-3,-1,2)	conductivity	conductivity	specific conductance	$\text{S}\cdot\text{m}^{-1}$	CRC D271, F125
(1,-3,-1,2)	conductivity	volume conductivity	volume conductivity	$\text{S}\cdot\text{m}^{-1}$	CRC F87
(1,-3,0,0)	temporal density	vibrational mode density	density of vibrational modes	$\text{s}\cdot\text{m}^{-3}$	AIP 43
(1,-2,-1,2)	conductance	admittance	admittance	S	M 15-3; Sz 58, 680

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(1,-2,-1,2)	conductance	conductance	conductance	S	AIP 41; AQ 28; CRC F87, F134, F283, F313; M 1-18, 15-3
(1,-2,-1,2)	conductance	conductance	mho	S	CRC F113, F313, F354
(1,-2,-1,2)	conductance	conductance	siemens	S	CRC F134, F283, F313, F357; M 1-18
(1,-2,-1,2)	conductance	<i>i conductance</i>	susceptance	S	AIP 41; M 15-3; Sz 58, 680
(1,-1,-1,0)	gas permeance	gas permeance	GPU	$\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}\cdot\text{Pa}^{-1}$	Wikipedia
(1,-1,-1,0)	gas permeance	transport diffusion coefficient	transport diffusion coefficient	$\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}\cdot\text{Pa}^{-1}$	Sz 59, 685
(1,-1,0,0)	mechanical permeability	material permeance	material permeance	$\text{kg}\cdot\text{m}^{-2}\cdot\text{s}^{-1}\cdot\text{Pa}^{-1}$	Sz 57, 679
(1,-1,0,0)	mechanical permeability	mechanical permeability	perm	$\text{kg}\cdot\text{m}^{-2}\cdot\text{s}^{-1}\cdot\text{Pa}^{-1}$	M 1-23
(1,0,-2,2)	mass conductivity	conductivity per density	equivalent conductivity	$\text{m}^2\cdot\text{S}\cdot\text{kg}^{-1}$	CRC F87
(1,0,-2,2)	mass conductivity	conductivity per density	mass conductivity	$\text{m}^2\cdot\text{S}\cdot\text{kg}^{-1}$	CRC F87
(1,0,-1,2)	molar conductivity	molar conductivity	molar conductance	$\text{m}^2\cdot\text{S}\cdot\text{mol}^{-1}$	CRC F113
(1,0,-1,2)	molar conductivity	molar conductivity	molar conductivity	$\text{m}^2\cdot\text{S}\cdot\text{mol}^{-1}$	CRC F87, CRC F113
(1,0,-1,1)	mobility	carrier susceptibility	carrier susceptibility	$\text{C}\cdot\text{s}\cdot\text{kg}^{-1}$	CRC F377
(1,0,-1,1)	mobility	mobility	mobility	$\text{m}^2\cdot\text{V}^{-1}\cdot\text{s}^{-1}$	CRC E110, E114
(1,0,-1,0)	gas permeability	gas permeability	barrer	$\text{mol}\cdot\text{m}^{-1}\cdot\text{s}^{-1}\cdot\text{Pa}^{-1}$	Wikipedia
(1,0,0,0)	time	time	a-1 time	s	CRC F78
(1,0,0,0)	time	time	astronomical year	s	CRC F78
(1,0,0,0)	time	time	beat	s	CRC F80

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(1,0,0,0)	time	time	day	s	CRC F89, F284, F349
(1,0,0,0)	time	time	effective neutron cycle time	s	CRC F93
(1,0,0,0)	time	time	half-life	s	AIP 43; CRC B227, F102
(1,0,0,0)	time	time	hour	s	CRC F284, F351
(1,0,0,0)	time	time	mean life	s	AIP 46
(1,0,0,0)	time	time	minim (1)	s	M 1-16
(1,0,0,0)	time	time	minute (2)	s	CRC F284, F354
(1,0,0,0)	time	time	month	s	CRC F354
(1,0,0,0)	time	time	period	s	AIP 43; CRC F118; M 15-3
(1,0,0,0)	time	mechanical permeance	perm-inch	$\text{kg}\cdot\text{m}^{-1}\cdot\text{s}^{-1}\cdot\text{Pa}^{-1}$	M 1-23
(1,0,0,0)	time	time	relaxation time	s	AIP 46; CRC F364
(1,0,0,0)	time	time	second (2)	s	CRC F123, F282; M 1-18; MH 2415
(1,0,0,0)	time	time	shake	s	CRC F357; M 1-24
(1,0,0,0)	time	thermal resistance	thermal resistance	$\text{K}\cdot\text{W}^{-1}$	AIP 43
(1,0,0,0)	time	time	time	s	AIP 40; CRC F129, F282, F310, F363; M 1-18, 3-52; MH 2415; Sz 46
(1,0,0,0)	time	time	time constant	s	M 15-3
(1,0,0,0)	time	time	tropical year	s	CRC F78, F129
(1,0,0,0)	time	time	week	s	CRC F359
(1,0,0,0)	time	time	year	s	CRC F359
(1,1,-1,0)	fluidity	fluidity	fluidity	$\text{s}^{-1}\cdot\text{Pa}^{-1}$	CRC F98
(1,1,-1,0)	fluidity	fluidity	rhe	$\text{s}^{-1}\cdot\text{Pa}^{-1}$	CRC F98, F357; M 1-24

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(1,1,0,0)	thermal resistivity	thermal resistivity	thermal resistivity	$\text{m}\cdot\text{s}\cdot\text{K}\cdot\text{J}^{-1}$	Sz 57, 675
(1,2,0,0)	insulation efficiency	insulation efficiency	clo	$\text{m}^2\cdot\text{K}\cdot\text{W}^{-1}$	CRC F348
(2,-5,-1,0)	density of states	density of states	density of states	$\text{m}^{-3}\cdot\text{J}^{-1}$	AIP 43
(2,-5,0,0)	vapor expansion intensity	vapor expansion intensity	vapor expansion intensity	$\text{kg}\cdot\text{m}^{-3}\cdot\text{K}^{-1}$	CRC F379
(2,-3,-1,2)	permittivity	permittivity	dielectric susceptibility	$\text{F}\cdot\text{m}^{-1}$	CRC F377
(2,-3,-1,2)	permittivity	permittivity	permittivity	$\text{F}\cdot\text{m}^{-1}$	AIP 44; CRC F215; M 15-3; Sz 58, 678
(2,-2,-1,0)	thermal expansion	thermal expansion	bulk expansion coefficient	K^{-1}	CRC F364
(2,-2,-1,0)	thermal expansion	pressure increase	coefficient of tension	K^{-1}	CRC F86
(2,-2,-1,0)	thermal expansion	volume thermal expansion	cubic expansion coefficient	K^{-1}	AIP 44
(2,-2,-1,0)	thermal expansion	linear thermal expansion	linear thermal expansion coefficient	K^{-1}	CRC F128; Sz 57, 676
(2,-2,-1,0)	thermal expansion	yield per energy	radiation chemical yield	$\text{mol}\cdot\text{J}^{-1}$	CRC F360
(2,-2,-1,0)	thermal expansion	thermal expansion	thermal expansion coefficient	K^{-1}	CRC B213, E106, F64, F128
(2,-2,-1,0)	thermal expansion	thermal expansion	thermogradient coefficient	K^{-1}	CRC F364, F366
(2,-2,-1,0)	thermal expansion	volume thermal expansion	volumetric thermal expansion coefficient	K^{-1}	CRC F128; Sz 57, 676
(2,-2,-1,2)	capacitance	capacitance	capacitance	F	AIP 41; AQ 28; CRC F84, F134, F283, F313; M 1-18, 15-3; MH 2415
(2,-2,-1,2)	capacitance	capacitance	farad	F	CRC F134, F283, F313; M 1-18; MH 2415;

Table 2: Catalog of Synonymous Dimensions: dimensional listing

Dims	Dimension	Measurement	Citation	SI units	Reference
(2,-1,-1,1)	first hypersusceptibility	first hypersusceptibility	first hypersusceptibility	$C \cdot m \cdot J^{-1}$	efunda
(2,0,-1,2)	electric polarizability	electric polarizability	electric polarizability	$C \cdot m^2 \cdot V^{-1}$	AIP 44
(2,1,-1,0)	compressibility	compressibility	compliance tensor	$m^2 \cdot N^{-1}$	AIP 40
(2,1,-1,0)	compressibility	compressibility	compressibility	$m^2 \cdot N^{-1}$	AIP 45; CRC E110, F12, F86, F87; Sz 676
(2,1,-1,0)	compressibility	specific vapor capacity	specific vapor capacity	Pa^{-1}	CRC F363
(2,1,-1,0)	compressibility	specific vapor capacity	vapor capacity	Pa^{-1}	CRC F365
(4,-3,-2,1)	second hypersusceptibility	second hypersusceptibility	second hypersusceptibility	$C \cdot m \cdot J^{-2}$	efunda
(4,-1,-2,3)	first hyperpolarizability	first hyperpolarizability	first hyperpolarizability	$C^3 \cdot m^3 \cdot J^{-2}$	NIST
(6,-2,-3,4)	second hyperpolarizability	second hyperpolarizability	second hyperpolarizability	$C^4 \cdot m^4 \cdot J^{-3}$	NIST