

SOME COMMONLY USED CONVERSIONS AND REFERENCES

Metric Units

Prefix	Symbol	Multiplier	Prefix	Symbol	Multiplier
atto-	a	$\times 10^{-18}$	deka-	D	$\times 10^1$
femto-	f	$\times 10^{-15}$	hecto-	H	$\times 10^2$
pico-	p	$\times 10^{-12}$	kilo-	K	$\times 10^3$
nano-	n	$\times 10^{-9}$	mega-	M	$\times 10^6$
micro-	μ	$\times 10^{-6}$	giga-	G	$\times 10^9$
milli-	m	$\times 10^{-3}$	tera-	T	$\times 10^{12}$
centi-	c	$\times 10^{-2}$	peta-	P	$\times 10^{15}$
deci-	d	$\times 10^{-1}$	exa-	E	$\times 10^{18}$

Common Conversions

Length to volume: $1 \text{ cm}^3 = 1 \text{ mL}$ (= 1 g water); $1 \text{ dm}^3 = 1 \text{ L}$ (= 1 kg water)

Temperature: $K = ^\circ\text{C} + 273$ $^\circ\text{F} = (^\circ\text{C} \times 9/5) + 32$; $^\circ\text{C} = (^\circ\text{F} - 32) \times 5/9$

English Conversions

1 ft = 12 inches	3 ft = 1 yard	1 mile = 5,280 feet
16 oz = 1 lb	1 English ton = 2,000 lbs	4 qt. = 1 gallon

English to Metric Conversions

Linear	1 inch = 2.54 cm	1 yard = 0.9144 m	1 m = 3.281 ft.
Mass	1 g = 0.034 oz.	1 kg = 2.2 lbs	1 metric ton = 2,205 lb
Pressure	760 mm Hg = 1 atm	14.7 psi = 1 atm	1 atm = 101.3 kPa
Volume	1 gallon = 3.785 L	1 mL = 0.034 oz.	1 $\text{cm}^3 = 0.0610 \text{ in}^3$

Commonly Used Polyatomic Ions

Acetate: $\text{CH}_3\text{COO}^{-1}$ or $\text{C}_2\text{H}_3\text{O}_2^{-1}$	Ammonium: NH_4^{+1}	Carbonate: CO_3^{-2}	Chromate: CrO_4^{-2}	Chlorate: ClO_3^{-1}	Chlorite: ClO_2^{-1}
Cyanide: CN^{-1}	Dichromate: $\text{Cr}_2\text{O}_7^{-2}$	Hydronium: H_3O^{+1}	Hydroxide: OH^{-1}	Hypochlorite: ClO^{-1}	Iodate: IO_3^{-1}
Mercury (I): Hg_2^{2+}	Mercury (II): Hg^{2+}	Nitrate: NO_3^{-1}	Nitrite: NO_2^{-1}	Oxalate: $\text{C}_2\text{O}_4^{-2}$	Perchlorate: ClO_4^{-1}
Permanganate: MnO_4^{-1}	Peroxide: O_2^{-2}	Phosphate: PO_4^{-3}	Sulfate: SO_4^{-2}	Sulfite: SO_3^{-2}	Thiosulfate: $\text{S}_2\text{O}_3^{-2}$