

Conversion Factors

Density

	To Obtain				
	gms/cm ³	kg/m ³	lbs/ft ³	lbs/in ³	lbs/U.S. gal
Multiply	By				
gms/cm ³	—	1000	62.428	0.0361273	8.3454
kg/m ³	0.001	—	0.062428	3.61273 x 10 ⁻⁵	0.0083454
lbs/ft ³	0.0160185	16.018463	—	5.78704 x 10 ⁻⁴	0.13368
lbs/in ³	27.679905	27,679.9	1728	—	231
lbs/U.S. gal	0.1198264	119.8264	7.4805195	0.004329	—

Flow

	To Obtain							
	cm ³ /min (ml/min)	cm ³ /sec (ml/sec)	ft ³ /hr	ft ³ /min	m ³ /hr	m ³ /min	L/hr	Lpm
Multiply	By							
cm ³ /min (ml/min)	—	0.0166667	0.0021189	0.0000353	0.00006	0.000001	0.06	0.001
cm ³ /sec (ml/sec)	60	—	0.1271340	0.0021189	0.0036	0.00006	3.6	0.06
ft ³ /hr	471.9474	7.865790	—	0.0166667	0.0283168	0.0004719	28.31685	0.4719474
ft ³ /min	28,316.85	471.9474	60	—	1.699008	0.0283168	1699.008	28.31685
m ³ /hr	16,666.67	277.7778	35.31467	0.5885777	—	0.0166667	1000	16.66667
m ³ /min	1,000,000	16,666.67	2118.876	35.31467	60	—	60,000	1000
L/hr	16.66667	0.2777778	0.0353147	0.0005885	0.001	0.0000167	—	0.0166667
Lpm	1000	16.66667	2.118876	0.0353147	0.06	0.001	60	—

Length

	To Obtain							
	Å	cm	ft	in	m	micron	mm	yd
Multiply	By							
Å	—	1 x 10 ⁻⁸	3.2808399 x 10 ⁻¹⁰	3.937008 x 10 ⁻⁹	1 x 10 ⁻¹⁰	0.0001	0.0000001	1.0936133 x 10 ⁻¹⁰
cm	1 x 10 ⁸	—	0.0328084	0.3937008	0.01	10,000	10	0.0109361
ft	3.048 x 10 ⁹	30.48	—	12	0.3048	304,800	304.8	0.3333333
in	2.54 x 10 ⁸	2.54	0.0833333	—	0.0254	25,400	25.4	0.0277778
m	1 x 10 ¹⁰	100	3.2808399	39.3700787	—	1,000,000	1000	1.0936133
micron	10,000	0.0001	3.2808399 x 10 ⁻⁶	3.9370079 x 10 ⁻⁵	0.0000010	—	0.001	1.0936133 x 10 ⁻⁶
mm	10,000,000	0.1	0.00328084	0.03937008	0.001	1,000	—	0.0010936
yd	9.144 x 10 ⁹	91.44	3	36	0.9144	914,400	914.4	—

Conversion Factors (continued)

Pressure

	To Obtain								
	atm	bars	ft of H ₂ O at 60°F	in of Hg at 0°C	in of H ₂ O at 60°F	kg/cm ²	kpa	mm of Hg at 0°C (torr)	psi
Multiply	By								
atm	—	1.01325	33.932	29.921	407.1827	1.0332	101.3171	760	14.696
bars	0.98692	—	33.4883	29.530	401.8596	1.019716	100	750.062	14.50368
ft of H ₂ O at 60°F	0.02947	0.029891	—	0.882646	12	0.03048	2.9890	22.4198	0.433107
in of Hg at 0°C	0.03342	0.033864	1.1340	—	13.6	0.034532	3.376895	25.4	0.49115
in of H ₂ O at 60°F	0.00246	0.002499	0.083333	0.073556	—	0.00254	0.249089	1.86832	0.03609
kg/cm ²	0.96787	0.980665	32.8084	28.95903	393.7008	—	98.03922	735.5592	14.22334
kpa	0.00987	0.010	0.33456	0.29613	4.01472	0.01020	—	7.5006	0.14504
mm of Hg at 0°C (torr)	0.00132	0.001333	0.044603	0.03937	0.535240	0.001360	0.133322	—	0.019337
psi	0.06805	0.068948	2.3089	2.0360	27.70851	0.070307	6.89465	51.715	—

Temperature

	To Obtain			
	°C	°F	°K	°R
Multiply	BY			
°C + 17.78	—	1.8	—	—
°C + 273.16	—	—	1	—
°F - 32	5/9	—	—	—
°F + 459.72	—	—	—	1
°K - 273.16	1	—	—	—
°R - 459.72	—	1	—	—

Volume

	To Obtain					
	cm ^{3*}	ft ³	in ³	m ³	gal (U.S. liquid)	L
Multiply	By					
cm ^{3*}	—	0.00003531	0.0610237	0.000001	0.0002641	0.001
ft ³	28,316.847	—	1728	0.02831685	7.480519	28.316847
in ³	16.387064	0.0005787	—	0.00001637	0.0043290	0.0163871
m ³	1,000,000	35.31467	61,023.74	—	264.172	1000
gal (U.S. liquid)	3785.412	0.13368056	231	0.00378541	—	3.785412
L	1000	0.03531467	61.02374	0.001	0.2641721	—

* 1 cm³ = 1 ml