

FORCE AND WEIGHT							
MN	kN	N	kgf	tonf	lbf		
1	1000	10 ⁶	1.0196 × 10 ⁵	100.4	2.248 × 10 ⁵		
10 ⁻³	1	10 ³	101.96	0.1004	224.82		
10 ⁻⁶	10 ⁻³	1	0.10196	1.004 × 10 ⁻⁴	0.2248		
9.807 × 10 ⁻⁶	9.807 × 10 ⁻³	9.807	1	9.842 × 10 ⁻⁴	2.2048		
9.964 × 10 ⁻³	9.964	9964	1016	1	2240		
4.448 × 10 ⁻⁶	4.448 × 10 ⁻³	4.448	0.45455	4.464 × 10 ⁻⁴	1		
MASS							
Tonne (Mg)	kg	g	UK ton	US ton	cwt	lb	oz
1	1000	10 ⁶	0.9842	1.1011	19.66	2.205 × 10 ³	3.527 × 10 ⁴
10 ⁻³	1	1000	9.842 × 10 ⁻⁴	1.101 × 10 ⁻³	1.966 × 10 ⁻²	2.2046	35.274
10 ⁻⁶	10 ⁻³	1	9.842 × 10 ⁻⁷	1.101 × 10 ⁻⁶	1.966 × 10 ⁻⁵	2.204 × 10 ⁻³	3.527 × 10 ⁻²
1.016	1016	1.016 × 10 ⁶	1	1.12	20	2240	35840
0.9081	908.1	9.081 × 10 ⁵	0.8928	1	17.856	2000	32000
5.085 × 10 ⁻²	50.85	5.085 × 10 ⁴	0.05	0.0560	1	112	1792
4.536 × 10 ⁻⁴	0.4536	453.6	4.46 × 10 ⁻⁴	5 × 10 ⁻⁴	8.92 × 10 ⁻³	1	16
2.835 × 10 ⁻⁵	2.835 × 10 ⁻²	28.349	2.79 × 10 ⁻⁵	3.125 × 10 ⁻⁵	5.580 × 10 ⁻⁴	6.25 × 10 ⁻²	1
VOLUME							
m ³ gallon	dm ³ (litre)	cm ³ (ml)	yd ³	ft ³	in ³	UK gallon	US gallon
1	10 ⁻³	10 ⁶	1.3079	35.311	6102	219.97	264.17
10 ⁻³	1	10 ³	1.308 × 10 ⁻³	3.351 × 10 ⁻²	61.02	0.2200	0.2642
10 ⁻⁶	10 ⁻³	1	1.308 × 10 ⁻⁶	3.351 × 10 ⁻⁵	6.102 × 10 ⁻²	2.199 × 10 ⁻⁴	2.642 × 10 ⁻⁴
0.7646	764.6	7.646 × 10 ⁵	1	27	46650	168.19	201.99
2.832 × 10 ⁻²	28.32	2.832 × 10 ⁴	3.704 × 10 ⁻²	1	1728	6.229	7.481
1.639 × 10 ⁻⁵	1.639 × 10 ⁻²	16.387	2.144 × 10 ⁻⁵	5.787 × 10 ⁻⁴	1	3.605 × 10 ⁻³	4.329 × 10 ⁻³
4.546 × 10 ⁻³	4.546	4.546 × 10 ³	5.946 × 10 ⁻³	0.1605	277.42	1	1.2008
3.785 × 10 ⁻³	3.785	3.785 × 10 ³	4.951 × 10 ⁻³	0.1337	231	0.8327	1
PRESSURE, STRESS, AND MODULUS OF ELASTICITY							
MN/m ² MPA	KN/m ² kPa	kp kgf/cm ²	- bar	atm	m H ₂ O	Mm Hg	psi lbf/in ²
1	1000	10.197	10	9.869	102.2	7500.6	145.04
0.001	1	1.019 × 10 ⁻²	0.0100	9.87 × 10 ⁻³	0.1022	7.5006	0.14504
9.807 × 10 ⁻²	98.07	1	0.9807	0.9678	10.017	735.56	14.223
0.100	100	1.0197	1	0.9869	10.215	750.06	14.504
0.1013	101.33	1.0332	1.0132	1	10.351	760.02	14.696
9.788 × 10 ⁻³	9.7885	9.983 × 10 ⁻²	9.789 × 10 ⁻²	9.661 × 10 ⁻²	1	73.424	1.4198
2.983 × 10 ⁻³	2.9835	3.043 × 10 ⁻²	2.984 × 10 ⁻²	2.945 × 10 ⁻²	0.3048	22.377	0.43275
1.333 × 10 ⁻⁴	0.1333	1.3595 × 10 ⁻³	1.333 × 10 ⁻³	1.315 × 10 ⁻³	1.362 × 10 ⁻²	1	1.934 × 10 ⁻²
0.1073	107.3	1.0942	1.0730	1.0589	10.960	804.78	15.562
6.895 × 10 ⁻³	6.895	7.031 × 10 ⁻²	6.895 × 10 ⁻²	6.805 × 10 ⁻²	0.7043	51.714	1
4.788 × 10 ⁻⁵	4.788 × 10 ⁻²	4.883 × 10 ⁻⁴	4.788 × 10 ⁻⁴	4.725 × 10 ⁻⁴	4.891 × 10 ⁻³	0.3591	6.944 × 10 ⁻³
LENGTH							
km	m	mm	mile	yard	ft	in	10 ⁻³ in
1	1000	10 ⁶	0.6214	1094	3281	3.937 × 10 ⁴	3.937 × 10 ⁷
10 ⁻³	1	1000	6.214 × 10 ⁻⁴	1.0936	3.281	39.370	3.937 × 10 ⁴
10 ⁻⁶	10 ⁻³	1	6.214 × 10 ⁻⁷	1.094 × 10 ⁻³	3.281 × 10 ⁻³	3.937 × 10 ⁻²	39.37
1.6094	1609.4	1.609 × 10 ⁶	1	1760	5280	63360	6.336 × 10 ⁷
9.144 × 10 ⁻⁴	0.9144	914.41	5.682 × 10 ⁻⁴	1	3	36	36000
3.048 × 10 ⁻⁴	0.3048	304.8	1.894 × 10 ⁻⁴	0.3333	1	12	12000
2.54 × 10 ⁻⁵	0.0254	25.4	1.578 × 10 ⁻⁵	2.778 × 10 ⁻²	8.333 × 10 ⁻²	1	1000
2.54 × 10 ⁻⁸	2.54 × 10 ⁻⁵	0.0254	1.578 × 10 ⁻⁸	2.778 × 10 ⁻⁵	8.333 × 10 ⁻⁵	10 ⁻³	1
DENSITY							
Tonne/m ³	kg/m ³	lb/in ³	UK ton/yd ³	US ton/yd ³	l b/ft ³		
Mg/m ³							
g/cm ³							
1	1000	0.03613	0.75247	0.8428	62.43		
10 ⁻³	1	3.613 × 10 ⁻⁵	7.525 × 10 ⁻⁴	8.428 × 10 ⁻⁴	6.243 × 10 ⁻²		
27.680	27680	1	20.828	23.328	1.728 × 10 ³		
1.3289	1.328 × 10 ³	4.801 × 10 ⁻²	1	1.12	82.955		
1.1865	1.186 × 10 ³	4.287 × 10 ⁻²	0.8929	1	74.074		
1.602 × 10 ⁻²	16.019	5.787 × 10 ⁻⁴	1.205 × 10 ⁻²	1.35 × 10 ⁻²	1		