

Reference Data

METRIC CONVERSION CHART

To Convert From	To	Multiply By	To Convert From	To	Multiply By			
Angle			Length					
degree	radian (rad)	0.01745329	foot (ft)	meter (m)	0.3048			
radian (rad)	degree	57.29578	inch (in)	meter (m)	0.0254			
Area			mil	meter (m)	0.0000254			
			inch (in)	micrometer (μm)	25400.00			
			meter (m)	foot (ft)	3.280840			
			meter (m)	inch (in)	39.37008			
			meter (m)	mil	39370.08			
			micrometer (μm)	inch (in)	0.00003937008			
			Temperature			Volume		
						foot ³	cubic meter (m ³)	0.02831685
inch ³	cubic meter (m ³)	0.00001638706						
cubic centimeter (cm ³)	cubic inch (in ³)	0.06102374						
degree Fahrenheit	degree Celsius	$t^{\circ C} = (t^{\circ F} - 32) / 1.8$	cubic meter (m ³)	foot ³	35.31466			
degree Celsius	degree Fahrenheit	$t^{\circ F} = 1.8t^{\circ C} + 32$	cubic meter (m ³)	inch ³	61023.76			
Force			gallon (U.S. liquid)	cubic meter (m ³)	0.003785412			
			pounds-force (lbf)	newtons (N)	4.448222	Section Properties		
			section modulus S (in ³)	S (m ³)	0.00001638706			
			moment of inertia I (in ⁴)	I (m ⁴)	0.0000004162314			
			modulus of elasticity E (psi)	E (Pa)	6894.757			
			section modulus S (m ³)	S (in ³)	61023.74			
			moment of inertia I (m ⁴)	I (in ⁴)	2402510.0			
			modulus of elasticity E (Pa)	E (psi)	0.0001450377			

To Convert From	To	Multiply By
Bending Moment or Torque		
lbf • ft	newton meter (N•m)	1.355818
lbf • in	newton meter (N•m)	0.1129848
N•m	lbf • ft	0.7375621
N•m	lbf • in	8.850748
Mass		
ounce (avoirdupois)	kilogram (kg)	0.02834952
pound (avoirdupois)	kilogram (kg)	0.4535924
ton (short, 2000 lb)	kilogram (kg)	907.1847
ton (long, 2240 lb)	kilogram (kg)	1016.047
kilogram (kg)	ounce (avoirdupois)	35.27396
kilogram (kg)	pound (avoirdupois)	2.204622
kilogram (kg)	ton (short, 2000 lb)	0.001102311
kilogram (kg)	ton (long, 2240 lb)	0.0009842064
Mass Per Unit Length		
lb/ft	kilogram per meter (kg/m)	1.488164
lb/in	kilogram per meter (kg/m)	17.85797
kg/m	lb/ft	0.6719689
kg/m	lb/in	0.5599741
Mass Per Unit Volume		
lb/ft ³	kilogram per cubic meter (kg/m ³)	16.01846
lb/in ³	kilogram per cubic meter (kg/m ³)	27679.9
kg/m ³	lb/ft ³	0.06242797
kg/m ³	lb/in ³	0.0000361273
lbs/ft ³	lbs/in ³	1728.0
Mass Per Unit Area		
lb/ft ²	kilogram per square meter (kg/m ²)	4.882428
kg/m ²	pound per square foot (lb/ft ²)	0.2048161
Pressure or Stress		
lbf/in ² (psi)	pascal (Pa)	6894.757
kip/in ² (ksi)	pascal (Pa)	6894757.0
lbf/in ² (psi)	megapascals (MPa)	0.006894757
pascal (Pa)	pound-force per square inch (psi)	0.0001450377
pascal (Pa)	kip per square inch (ksi)	0.0000001450377
megapascals (MPa)	lbf/in ² (psi)	145.0377

Abbreviations
Defl. = Deflection
S.F. = Safety Factor
Ft. = Feet
Pre-galv. = Pre-galvanized Steel
K Factor = Deflection ÷ load in Lbs./Ft.
o.c. = On Center
PVC = Poly Vinyl Chloride
In. = Inch
psi = Pounds per Square Inch
wt./c = Weight per 100 pieces
Metric Symbols
m = meter
cm = centimeter
mm = millimeter
μm = micrometer
kg = kilogram
N = newton
kN = kilonewton
Pa = pascal
MPa = megapascal