

The SI (system international) or metric system is rapidly becoming the standard in the United States. To aid in the complete transition in the near future some conversion factors which relate to conservation work are attached.

The reference and "official" source for SI conversion is ASTM E380-91a.

Here are some guidelines for "preferred units":

Rules for Linear Measurement (Length)

Use only the meter and millimeter in structure design and construction.

Use the kilometer for long distances and the micrometer for precision measurements, (soils, etc.).

Avoid use of the centimeter.

For survey measurement, use the meter and kilometer.

Rules for Area

The square meter is preferred.

Very large areas may be expressed in square kilometers and very small areas, in square millimeters.

Use the hectare (10,000 square meters) for land and water measurement only.

Avoid use of the square centimeter.

Linear dimensions such as 40 x 90 mm may be used; if so, indicate width first and height second.

Rules for Volume and Fluid Capacity

Cubic meter is preferred for volumes in construction and for large storage tanks.

Use liter (L) and milliliter (mL) for fluid capacity (liquid volume). One liter is 1/1000 of a cubic meter or 1000 cubic centimeters.

Direct Conversion Factors

Quantity	From Inch-Pound Units	To Metric Units	Multiply by
Length	mile	km	1.609
	yard	m	0.914
	foot	m	0.305
		mm	304.800
	inch	mm	25.4
	rod	m	5.0292
Area	square mile	km ²	2.590
	acre	m ²	4,046.87
		ha (10,000 m ²)	0.405
	square yard	m ²	0.836
	square foot	m ²	0.092 9
	square inch	mm ²	645.16
Volume	acre foot	m ³	1,233.49
	cubic yard	m ³	0.765
	cubic foot	m ³	0.028
	cubic foot	cm ³	28,316.85

Volume (con't)	cubic foot	L (1000 cm ³)	28.317
	100 board feet	m ³	0.236
	gallon	L (1000 cm ³)	3.785
	cubic inch	cm ³	16.387
	cubic inch	mm ³	16,386.064
Velocity (speed)	ft/sec	m/sec	0.305
	miles/hr	km/hr	1.609
Pressure	lb/in ²	kPa (kilopascal)	6.895
	lb/ft ²	kPa	0.047 9
	lb/ft ²	kg/m ²	4.882
Flowrate	ft ³ /min	m ³ /sec	0.000 472
	ft ³ /sec	m ³ /sec	0.028 3
Work (energy)	lb-ft.	Nm (newton meter or joule)	1.356

Force (weight)	lb	kg	0.454
	lb	N (newton)	4.448
	ton	kg (kilogram)	907.185
	ton	N	8,896.443

Density	lb/ft ³	kg/m ³	16.018
	lb/yd ³	kg/m ³	0.593

Power	hp (550 ft-lb/sec)	W (watt)	745.700
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Some useful approximations in helping to make the switch to S

1 mile per gallon is about 0.4 kilometer/liter

35 cubic feet is approximately one cubic meter

1 hectare is about 2 1/2 acres

1 hectare is about 330 feet on each side

1 square meter is about 11 square feet

10 meters is approximately 33 feet

10 km is about 6 miles

10 miles is approximately 16 km

1 cubic yard is about 3/4 cubic meter

1 rod is about 5 meters.

1 liter is about 61 cubic inches (engine displaceme