

## Unit Weights Calculating Volume

Materials and Liquids - Pounds / cu. Ft			
Aluminum	165	Lumber -Fir	34
Steel	480	Lumber - Hardwood	62
Brick	120	Lumber RR Ties	50
Reinforced Concrete	150	Lumber - Oak	62
Loose Topsoil/Loam/Sand	100	Oil, Motor	58
Compacted Sand	120	Diesel	52
Solid Rock	170	Gasoline	45
Crushed Rock	125	Portland Cement	94
Compacted Gravel	140	Drilling Muds	90
Loose Gravel	110	Water	63

Pounds / sq. ft.	
Steel Plate	
1/8"	5
1/4"	10
1/2"	20
1"	40

Pounds / Gal.	
Gas	6
Diesel	7
Water	8.3

Area and Volume Formulas	
Area:	Square or Rectangle = LW Circle = $PI \times R \times R$
Volume:	Block = HWL Cylinder = Area of Circle x Length of Cylinder = $PI \times R \times R \times L$
<i>H = Height W = Width L = Length d = Diameter r = 1/2 diameter ``PI`` = 3.2 (Approx)</i>	
<i>Make Sure all units are same (ft, lb, etc.)</i>	

Common Conversions	
7.5 gallons of liquid = 1 cubic foot	1 Meter = 3.28 Feet
27 cubic feet = 1 cubic yard	1 Mile = 5,280 Feet
2,000 lbs = 1 US ton	1 Acre = 43,560 Sq FT
2,200 lbs = 1 mton = 1,000 kg	1 kg = 2.2 lbs- mass