



GNP Graystar

Specialty Materials

Conversion Factors

Mass Conversion Factors		
1 kilogram (kg)	1000 grams	2.2046226 lbs.
1 Pound (lb.)	0.45359237 kg	453.59237 grams
1 Metric Ton (MT)	1000 kg	2204.6226 lbs.
1 Met Ton (NT)	2000 lbs.	907.18474 kg

Length Conversion Factors			
1 millimeter (mm)	10^{-3} m	0.03937 in.	1000 micron
1 micron (μ m)	10^{-6} m	0.001 mm	3.937×10^{-5} in.
1 Angstrom	0.0001	3.937×10^{-9} in.	-

Volume Conversion Factors			
1 liter (l)	1000 cm ³	61.02 in ³	0.03532 ft ³
1 cubic meter	1000 l	35.32 ft ³	-

Density Conversion Factors			
1 gm/cm ³	1000 kg/m ³	0.036127 lb./in. ³	62.428 lb./ft. ³
1 kg/m ³	0.062428 lb./ft	-	-

Pressure Conversion Factors	
1 kg/cm ²	14.223 lb./in. ²
1 lb./in. ²	7.0309×10^{-2} kg/cm ²

Temperature Conversion Factors		
$^{\circ}\text{C} = (^{\circ}\text{F} - 32) / 1.8$	$^{\circ}\text{F} = (^{\circ}\text{C} \times 1.8) + 32$	$\text{K} = ^{\circ}\text{C} + 273.15$

Heat Transfer Coefficient Conversion Factors				
1 watt/m ² /°C	1 watt/m ² /°K	-	-	-
1 Kcal/hr/m ² /°C	0.204816 Btu/hr/ft ² /°F	$2.78 \cdot 10^{-5}$ cal/sec/cm ² /°C	0.000116 watt/cm ² /°C	1.163 watt/m ² /°C
1 Btu/hr/ft ² /°F	0.000136 cal/sec/cm ² /°C	0.000568 watt/cm ² /°C	5.678 watt/m ² /°C	-
1 watt/m ² /°C	57.778 Btu/hr/ft ² /°F	2.39×10^{-5} cal/sec/cm ² /°C	0.859845 Kcal/hr/m ² /°C	0.001 watt/cm ² /°C

Thermal Conductivity Conversion Factors				
1 Kcal/hr/m/°C	0.671969 Btu/hr/ft/°F	0.002778 cal/sec/cm/°C	0.01163 watt/cm/°C	1.163 watt/m/°C
1 Btu/hr/ft/°F	4.134×10^{-3} cal/hr/m/°C	1.488 Kcal/hr/m/°C	0.0173 watt/cm/°C	1.73 watt/m/°C
1 watt/m/°C	0.5777 Btu/hr/ft/°F	2.39×10^{-3} cal/sec/cm/°C	0.859845 Kcal/hr/m/°C	0.01 watt/cm/°C
1 watt/cm/°C	57.778 Btu/hr/ft/°F	0.23884 cal/sec/cm/°C	85.9845 Kcal/hr/m/°C	100 watt/m/°C



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Specific Energy Conversion Factors				
1 cal/kg	0.0018 Btu/lb.	0.001 cal/gm	0.004187 joule/gm	4.1868 joule/kg
1 joule/kg	4.299×10^{-4} Btu/lb.	2.388×10^{-4} cal/gm	0.001 joule/gm	2.388×10^{-4} cal/gm
1 Btu/lb.	0.5555 cal/gm	555.55 cal/kg	2.326 joule/gm	2326 joule/kg

Specific Heat Conversion Factors			
1 cal/gm/°C	1 Btu/lb./°F	-	-
1 cal/kg/°C	0.001 Btu/lb./°F	4.1868 joule/kg/°C	0.004187 joule/gm/°C
1 joule/kg/°C	2.388×10^{-4} Btu/lb./°F	0.2388 cal/kg/°C	0.001 joule/gm/°C
1 Btu/lb./°F	1000 cal/kg/°C	4186.8 joule/kg/°C	-

Concentrations	
1 milligram/Liter	1 PPM (part per million)
1 microgram/Liter	1 PPB (part per billion)
1 nanogram/Liter	1 PPT (part per trillion)

Numbering System				
1 cal/kg	0.0018 Btu/lb.	0.001 cal/gm	0.004187 joule/gm	4.1868 joule/kg
1 joule/kg	4.299×10^{-4} Btu/lb.	2.388×10^{-4} cal/gm	0.001 joule/gm	2.388×10^{-4} cal/gm
1 Btu/lb.	0.5555 cal/gm	555.55 cal/kg	2.326 joule/gm	2326 joule/kg

Numbering System				
Prefix	Symbol	Numerically		Name
Tera	T	1,000,000,000,000	10^{12}	Trillion
Giga	G	1,000,000,000	10^9	Billion
Mega	M	1,000,000	10^6	Million
Kilo	k	1,000	10^3	Thousand
Hecto	h	100	10^2	Hundred
Centi	c	0.01	10^{-2}	Hundredth
Milli	m	0.001	10^{-3}	Thousandth
Micro	μ	0.000 001	10^{-6}	Millionth
Nano	n	0.000 000 001	10^{-9}	Billionth
Pico	p	0.000 000 000 001	10^{-12}	Trillionth

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