

Engineering Information

Thermometer and Hydrometer Scales

The number of degree between freezing point and boiling point water is $212-32=180$ degree on the Fahrenheit scale, and 100 degrees on the centigrade scale. The magnitude of the degree F. relative to degrees C, is thus as 5 to 9.

$$\text{Temp C} = 5/9(F^{\circ} - 32); \text{Temp F} = 2/5(C^{\circ} + 32).$$

The following formula enables degrees baume to be converted into specific Gravity

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WEIGHT OF DRAWN COPPER BARS TAPE, FLATS & STRIPS							
Standard Rectangular Sizes, Kilos per lineal Metre							
Size Inch	Kilos	Size Inch	Kilos	Size Inch	Kilos	Size Inch	Kilos
1/16x1/2	.1785	3/16x1/2	.5356	1/4x1/3/4	2.5112	3/8x1/2	9.6768
5/8	.2232	5/8	.6725	2	2.8688	4.3/4	10.2225
3/4	.2678	3/4	.8064	2.1/4	3.2288	5	10.7656
7/8	.3139	7/8	.9419	2.1/2	3.5824	1/2x1	2.8688
1	.3586	1	1.0742	2.3/4	3.5960	1.1/4	3.5824
1.1/4	.4478	1.1/4	1.3450	3	4.2968	1.1/2	4.2968
1.1/2	.5371	1.1/2	1.6144	3/8x1	2.1484	1.3/4	5.0145
1.8x1/2	.3570	1.3/4	1.8548	1.1/4	2.6984	2	5.7507
5/8	.4464	2	2.1484	1.1/2	3.2288	2.1/4	6.4576
3/4	.5356	2.1/4	2.4192	1.3/4	3.7096	2.1/2	7.0648
7/8	.6278	2.1/2	2.6784	2	4.2968	2.3/4	7.8892
1	.7172	2.3/4	2.9452	2.1/4	4.8384	3	8.5480
1.1/4	.8956	3	3.2288	2.1/2	5.3568	3.1/4	9.3297
1.1/2	1.0742	1.4x1/2	.7172	2.3/4	5.9272	3.1/2	10.0340
1.3/4	1.2556	5/8	.8956	3	6.4576	3.3/4	10.7656
2	1.4344	3/4	1.0742	3.1/4	6.9936	4	11.5014
2.1/4	1.6144	7/8	1.2556	3.1/2	7.4192	4.1/4	12.2083
2.1/2	1.7912	1	1.4344	3.3/4	8.0064	4.1/2	12.9152
2.3/4	1.9730	1.1/4	1.7912	4	8.5480	4.3/4	13.5224
3	2.1484	1.1/2	2.1484	4.1/4	9.1497	5	14.1296

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THERMOMETER AND HYDROMETER SCALES		
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Temp C = $5/9(F^{\circ} - 32)$; Temp F = $2/5(C^{\circ} + 32)$.		
The following formula enables degrees Baume to be converted into specific Gravity :		
140	140	
Sq Gr = $\frac{140}{\text{Deps. B.} + 130}$	Sp. Gr. = $\frac{140}{145 - \text{Deps. B.}}$	
For liquids heavier than water - Sp. Gr. = $\frac{145 - \text{Deps. B.}}{61.4h}$		
Pressure of a column of oil h feet high = $P = \frac{131.5 + B^6}{1b./in.^2}$		
ELETRICAL ENGINEERING		
746 Watts equal one Mechanical Horse-Power. Generators are rated in Kilowatts = 1000 Watts. The Kilowatt Hour quantity unit for power. 1 Watt = 1 Volt x 1 Ampere. 1 B.H.P. = 0.764 Kilowatts, 1K _m H. = 3413 B. Th. U.I.E.E. 1939, 11 th Edition.		
Electrical pressure, potential different, or elect. n. o. t. force.		
E.M.F	Volt	10^3
Current	Amp	10^{-1}
Resistance	Ohm	10^2
Work	Joule	10^3
Capacity	Farad	10^{-2}
Capacity	Micro-Fared	10^{-15}
Power	Watt	10^7
Power	Kilowatt	10^{10}
Energy	Kilowatt	$36x$
	hour	10^{12}

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