

**Form to Calculate Flotation: boats 2 HP or less & manually propelled Less Than 20 Ft (6 M);
Using ABYC, USCG and Metric Values**

See instructions: Input data Fields in blue in pounds, in red in Metric.

Enter boat description.

Newboatbuilders.Com

Boat: Make, Mod, Year

Length

Breadth

Date 3/21/2019

Does not automatically convert to metric

Engine Hp

MC = Maximum Weight Capacity

PC = Maximum persons Capacity

B = Buoyancy of Flotation Material

0	Hp	0	Kw
0	lb	0	kg
0	lb	0	kg
0	lb/cu ³	0	kg/m ³

ABYC

Table Weights Engine & Battery. (Fixed weights cannot be changed)

ABYC Table 1a (lb)

ABYC Table 1b (kg)

For Manually propelled boats

	ABYC	Metric
Dry	30	14.0
Swamped	27	12.0
Weight =	0	0

Weights of hull and materials in the boat.

Factors K from the Table

	lb	kg	Factor K	Wt X K	Totals
Wh Fiberglass	0	0.00	0.33	0.0	0.00
Wh Aluminum	0	0.00	0.33	0.0	0.00
Wh1 Wood	0	0.00	-0.81	0.0	0.00
Wh2 metal Fittings	0	0.00	0.88	0.0	0.00
wh3 Fasteners	0	0.00	0.88	0.0	0.00
wh4 Misc	0	0.00	0.63	0.0	0.00
Wh5 misc from Worksheet	0	0.00	1.00	0.0	0.00
Wd Deck Weight (Dry K = 1)	0	0.00	1.00	0.0	0.00
Wb = Total Boat Weight			total	0.0	0.00

Dead Weight =

Maximum weight Capacity - Persons Capacity - Motor Controls Battery = Wdw

Wdw = Dead Weight = MC - PC - Wp If 0 or Negative Wdw = 0

0	0.000
lb	kg

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Fb = Amount of Flotation for Boat Weight

	Cu ft	Cu M
Fb = (Wb) / B in Cubic Feet or Cubic Meters	0.00	0.000

Fp = Amount of Flotation For Persons Weight (PC)

Fp For boats less than 550 lb (249.5 Kg)

The USCG requirement is 2/15 = 0.1333 but in the Guidelines they use 0.25 to provide a safety factor. See Note 11.

	Cu ft	Metric
Fp = (0.1333 x (PC-Wp)) / B (USCG Formula)	0.00	Cu M
Fp = (0.1333 X PC) + (0.25 Wdw) / B (ABYC Formula)	0.00	0.000
Fp W/USCG Safety Factor (0.25 x (PC-Wp)) / B	0.00	

Fm = Flotation for swamped motor = (Wp) / B

Wp = Swamped Engine Wt

	Cu ft	Cu M
Ft = Amount of Flotation in Cu Feet or Cu Meters	0.00	0.000
Ft = Ft = Fb + Fp + Fm Rounded Total	0.00	0.000