

**Form to Calculate Flotation for Outboard Motor boats Over 2 HP, Less Than 20 Ft (6 M)**

**Using ABYC, USCG and Metric Values Revision 1 03/12/2019**

*See notes: Enter blue data fields in pounds, enter red data fields in metric.*

**This block is for boats with a single engine See Note 1 & 2**

Newboatbuilders.Com

Boat: Make, Mod, Year

Length

Boat Weight

Breadth

**See Note 3**

Date 3/20/2019

**Does not automatically convert to Metric**

Engine Hp

MC = Maximum Weight Capacity

PC = Maximum persons Capacity

B = Buoyancy of Flotation Material

40	Hp	0	Kw
0	lb	0	kg
0	lb	0	kg
0.0	lb/cu <sup>3</sup>	0.0	kg/m <sup>3</sup>

ABYC

**When engine HP or KW is entered automatic Lookup gets the weight**

Table Weights Engine & Battery

ABYC Table 1A (lb)

**ABYC Table 1b (kg)**

Battery Wt Submerged

X 2

	Dry	Col 2	286	0
	Swamped	Col 4	255	0
	Battery	Col 8	25	0

**Sea Note 4 & 5**

Weights of hull and materials in the boat.

Factors K from the Table

**Boat Weights Submerged**

Wh Fiberglass

Wh Aluminum

Wh1 Wood

Wh2 metal Fittings

wh3 Fasteners

wh4 Windshield

Wh5 Other from Worksheet

lb kg Factor K

0	0.00	0.33
0	0.00	0.63
0	0.00	-0.81
0	0.00	0.88
0	0.00	0.88
0	0.00	0.63
0	0.00	1.00
0	0.00	1.00
0	0.00	0.75

**Boat Weights Dry:**

Wd Deck Weight (If Dry K = 1)

Other from Work sheet

**Boat Weights Swamped**

Boat Weights Swamped K=0.75

**Wb = Total Boat weights**

total

	ABYC	Metric
Table Weights Engine & Battery	lb	kg
ABYC Table 1A (lb)	286	0
<b>ABYC Table 1b (kg)</b>	255	0
Battery Wt Submerged X 2	25	0
Weights of hull and materials in the boat.	ABYC	Metric
Factors K from the Table	lb	Kg
<b>Boat Weights Submerged</b>	Wt X K	Totals
Wh Fiberglass	0.0	0.0
Wh Aluminum	0.0	0.0
Wh1 Wood	0.0	0.0
Wh2 metal Fittings	0.0	0.0
wh3 Fasteners	0.0	0.0
wh4 Windshield	0.0	0.0
Wh5 Other from Worksheet	0.0	0.0
<b>Boat Weights Dry:</b>	lb	kg
Wd Deck Weight (If Dry K = 1)	0.0	0.0
Other from Work sheet	0.0	0.0
<b>Boat Weights Swamped</b>	lb	kg
Boat Weights Swamped K=0.75	0.0	0.0
<b>Wb = Total Boat weights</b>	total	0.0
		0.0

**Form to Calculate Flotation for Outboard Motor boats Over 2 HP, Less Than 20 Ft (6 M)  
Using ABYC, lb and Metric Values**

Boat: Make, Mod, Year

Date 3/20/2019

ABYC

ABYC

**Machinery Weights**

ABYC

lb

Metric

Outboard Motor Weight Dry

Col 2

286

0

Table 1a or Table 1b

Portable Fuel Tank **see Note 10.** Yes/No

Controls and Rigging Weight

Col 5

14

0.00

Engine Running Wt

Col 3

300

0.00

Battery Weight submerged

Col 7

14

0.00

Dry Battery Weight

Col 6

45

0.00

Full Portable Fuel tank Wt if used

Col 8

100

0.00

Wp = Col 3+5+6+8 (ABYC)

Col 9

459

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

lb

kg

Fb = Amount of Flotation for Boat Weight

Cu ft

Cu M

Fb = (Wb) / B in Cubic Feet or Cubic Meters

0.00

0.00

Round Up

0.00

Fp = Amount of Flotation For Persons Weight (PC)

Cu ft

Cu M

Fp For boats PC over 550 lb (249.5 Kg)

0.00

0.00

Fp = (0.5 X 550) + .125 (PC-550 + .25(Wdw) / B

Round Up

0.00

Cu Ft

Cu M

Fp For boats PC less than 550 lb (249.5 Kg)

0.00

0.00

Fp = (0.5 x PC) + .25(Wdw) / B

Round Up

0.00

Cu Ft

Cu M

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

0.00

0.00

Wp = Swamped Engine + Swamped Battery + Controls

0.00

Cu ft

Cu M

Ft = Amount of Flotation in Cubic

0.00

0.00

**Ft = Fb + Fp + Fm**

Rounded Total

0.00

0.00

**Form to Calculate Flotation for Outboard Motor boats Over 2 HP & Less Than 20 Ft (6 M);  
With Twin Outboard Engines Using ABYC, USCG and Metric Values** Page 1b

*See notes: Enter blue data fields in pounds, enter red data fields in metric.*

**This block is for boats with twin engines. See Note 1 & 2**

Newboatbuilders.Com

Boat: Make, Mod, Year

Length

Boat Weight

Breadth

**See Note 3**

Date 3/20/2019

**Does not automatically convert to Metric**

Engine Hp (Of one engine)

MC = Maximum Weight Capacity

PC = Maximum persons Capacity

B = Bouyancy of Flotation Material

0	Hp	0	Kw
0	lb	0	kg
0	lb	0	kg
0.0	lb/cu <sup>3</sup>	0.0	kg/m <sup>3</sup>

**When engine HP or KW is entered automatic Lookup gets the weight**

Table Weights Engine & Battery

ABYC Table 1a (lb) X 2

Dry

Col 2

ABYC

lb

Metric

Kg

0

0

ABYC Table 1b (kg) X 2

Swamped

Col 4

0

0

Battery Wt Submerged x 2

Battery

Col 8

0

0

**Sea Note 4 & 5**

Weights of hull and materials in the boat.

Factors K from the Table

ABYC

lb

Metric

Kg

**Boat Weights Submerged**

Wh Fiberglass

lb

kg

Factor K

Wt X K

Totals

0 0.00 0.33

0.0

0.0

Wh Aluminum

0 0.00 0.63

0.0

0.0

Wh1 Wood

0 0.00 -0.81

0.0

0.0

Wh2 metal Fittings

0 0.00 0.88

0.0

0.0

wh3 Fasteners

0 0.00 0.88

0.0

0.0

wh4 Windshield

0 0.00 0.63

0.0

0.0

Wh5 Other from Worksheet

0 0.00 1.00

0.0

0.0

**Boat Weights Dry**

Wd Deck Weight (If Dry K = 1)

0 0.00 1.00

0.0

0.0

Other from Work sheet

0 0.00 1.00

0.0

0.0

**Boat Weights**

Boat Weights Swamped K=0.75

0 0.00 0.00

0.0

0.0

Other From worksheet

0 0.00 0.00

0.0

0.0

Wb Total

total

0.0

0.0

**Form to Calculate Flotation for Outboard Motor boats Over 2 HP & Less Than 20 Ft (6 M);  
With Twin Outboard Engines Using ABYC, USCG and Metric Values** Page 2b

Boat: Make, Mod, Year

Date **3/20/2019**

<b>Machinery Weights x 2</b>	ABYC	ABYC	Metric
Outboard Motor Weight Dry	Table	0	0
Portable Fuel Tank <b>see Note 10.</b> yes/no	yes		
Engine Running Weight	Col 3	0	0
Battery Submerged Weight	Col 7	0	0
Battery Dry Weight	Col 6	0	0
Full Portable Fuel tank Wt if used	Col 8	0	0
Controls and Rigging Weight	Col 5	0	0
Wp = Col 3+5+6+8 (ABYC)	Col 9	0	0

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
	lb	kg

Fb = Amount of Flotation for Boat Weight

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

Fp = Amount of Flotation For Persons Weight (PC) Fp For boats over 550 lb (249.5 Kg)	Cu ft	Cu M
PC = (0.5 X 550)+ .125 (PC-550 + .25 (Wdw) / B	0.00	0.00
Round Up	0.00	

Fp For boats less than 550 lb (249.5 Kg)	Cu ft	Cu M
PC = (0.5 x PC) + .25 (Wdw) / B	0.00	0.00
Round Up	0.00	

Fm = Flotation for swamped motors = (Wp) / B	Cu ft	Cu M
Wp = Swamped Engines + Swamped Batterys + Controls	0.00	0.00

Ft = Amount of Flotation in Cubic	Cu ft	Cu M
<b>Ft = Fb + Fp + Fm</b> Rounded Total	0.00	0.00
	Cu ft	Cu M