

**Form to Calculate Flotation for Inboard/Sterndrive Motor boats 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.

Boat: Make, Mod, Year

Length Boat Weight

Breadth

Date 3/21/2019

Does not convert to metric. Enter Metric

Machinery Weight

1075	lb	487.6	Kg
1400	lb	635.0	kg
1100	lb	499.0	kg
60.4	lb/cu ³	1025.0	kg/m ³
40.0	gals	151.0	liters

MC = Maximum Weight Capacity

PC = Maximum persons Capacity

B = Buoyancy of Flotation Material

Ff = Fuel Tank Capacity

Weights of hull and materials in the boat.

Factors K from the Table

Boat Weights Submerged

	lb	kg	Factor K	ABYC lb	USCG Lb	Metric Kg
Wh Fiberglass	800	362.87	0.33	264.0	264.0	119.7
Wh Aluminum	80	36.29	0.63	50.4	50.4	22.9
Wh1 Wood	150	68.00	-0.81	-121.5	-121.5	-55.1
Wh2 metal Fittings	30	13.60	0.88	26.4	26.4	12.0
wh3 Fasteners	0	0.00	0.88	0.0	0.0	0.0
wh4 Windshield	0	0.00	0.63	0.0	0.0	0.0
Wh5 Other from Worksheet	0	0.00	0.63	0.0	0.0	0.0

Boat Weights Dry:

Wd Deck Weight (If Dry K = 1)	245	111.13	0.33	80.9	80.9	36.7
Other K Factor from Materials Work Sheet	55	24.94	-0.81	-44.6	-44.6	-20.2

Boat Weights Swamped

Boat Weights Swamped K=0.75	228	103.42	0.63	143.6	143.6	65.2
-----------------------------	-----	--------	------	-------	-------	------

Boat Weight Wb (total from above)	1588	720.25		399.2	399.2	181.1
-----------------------------------	------	--------	--	-------	-------	-------

Ff = Full Fuel Tank Weight: gasoline = 6 lb/gal or 0.74 kg/Liter				240.0		111.7
--	--	--	--	-------	--	-------

Wp = Swamped motor, drive unit + Battery Wt				806.3	806.3	365.7
---	--	--	--	-------	-------	-------

(includes motor, drive unit, propeller, shaft, battery & transmission)

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

Boat: Make, Mod, Year

0

Wdw = Dead Weight = Max Wt Capacity - dry weight
(If zero or negative ignore)

1155.0	523.9
--------	-------

Fb = Amount of Flotation for Boat Weight
Fb = (Wb) / B in Cubic feet or Cubic Meters

	ABYC	USCG	Metric
	Cu ft	Cu Ft	Cu M
Roundup	6.61	6.61	0.18
	6.70	6.70	

Fp = Amount of Flotation For Persons Weight (PC)
Fp For boats over 550 lb (249.5 Kg)

	Cu ft	Cu Ft	Cu M
Roundup	6.04	5.79	0.16
	6.10	5.80	

Fp = 0.25* ((MC-Fuel Wt) + (MC-PC)) / B ABYC
Fp = 0.25* (MC) / B USCG

Fm = Flotation for swamped motor = (Wp) / B
Wp = (Engine Wt + Battery Weight) * 0.75

	Cu ft	Cu Ft	Cu M
Roundup	13.35	13.35	0.36
	13.40	13.40	

Ft = Amount of Flotation in Cubic

Ft = Ft = Fb + Fp + Fm

Rounded Total

	Cu ft	Cu Ft	Cu M
	26.00	25.75	0.69
	26.10	25.80	0.70