

PAYLOAD estimate for my Mini-650 design project

category	description	weight	
sailor	POB	80,00	
	personal gear	8,00	
navigation	charts, pilots	2,00	
	plastic sextant	0,40	
	portable GPS	0,30	
	barograph	0,30	
	binoculars	2,00	
	misc. stuff	0,20	
communication	VHF transmitter, antenna, etc.	3,50	
	HF receiver, antenna coupler, etc.	1,50	
	cassette recorder	0,30	
	tri-band cellular phone, incl. power cable	0,25	
safety	liferaft complying with Mini rules	33,00	
	life jacket	3,00	
	dry suit/survival suit	7,00	
	survival kit, according to MT-rule	13,00	
	reserve drinking water, acc. rule	10,00	
	2 torches, incl. spare battery set	0,40	
	Argos transmitter	4,00	
	flares and other pyrotechnic signalling	0,80	
	EPIRB	0,80	
	anchor incl. rope & chain, as per rule	12,00	
	foghorn, sea anchor, bolt cutter	4,00	
	oar and oarlock	2,50	
	cooking utensils	Kettle/cooker combination welded together	0,80
		spare gas cartridges (4 pcs.)	1,20
energy	Honda 450W generator	7,50	
	10 ltr. cannister, filled with fuel	7,50	
	battery charger/regulator	2,00	
consumables	drinking water for MT	108,00	
	food	20,00	
tools & spares	rudder blade	4,80	
	bolts, nuts, washers, etc.	0,15	
	sail repair tape & stuff	0,25	
	small toolset, a few blocks	2,50	
	rope	4,00	
total:		347,95	

Summary:

payload estimate, including sailor	347,95
target design weight, racing	1075,00
target weight for hull, keel, appendages, rig, instruments, 200 amps battery, etc.	727,05

Remarks:

- all weights in kilograms
- 'energy' group without solar panels, correct accordingly

My conclusion: to end up with a target racing displacement of around 1075 kgs, an empty weight of around 730 kgs needs to be achieved.

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