MoMu1	3.29.3 b)	One hand-held satellite telephone, watertight or with waterproof cover and internal battery.
MoMu0	3.29.4	at least two hand-held marine VHF transceivers each with min 5 W output power, watertight or with waterproof covers. When not in use to be stowed in a grab bag (see OSR 4.21)
MoMu1,2,3,4	3.29.5	a hand-held marine VHF transceiver, watertight or with a waterproof cover. When not in use to be stowed in a grab bag or emergency container (see OSR 4.21)
**	3.29.6	a second radio receiver, which may be the handheld VHF in 3.29.5 above, capable of receiving weather bulletins
MoMu0	3.29.7	a direction-finding radio receiver operating on 121.5 MHz to take a bearing on a PLB or EPIRB, or an alternative device for crew overboard location when each crew member has an appropriate personal unit (see OSR 4.22.1);
MoMu3	3.29.8	a GPS
MoMu0	3.29.9	a satellite device able to send and receive data and a tracking device shall be permanently installed and permanently powered up for the duration of the race and for which the race committee shall have polling authority.
MoMu0	3.29.10	an MF/HF marine SSB transceiver (GMDSS/DSC) with at least 125 W transmitter power and frequency range from at least 1.6 to 29.9 MHz with permanently installed antenna and earth.
MoMu0	3.29.11	an active radar set permanently installed either:
MoMu0	a)	a pulse (magnetron) unit with not less than 4 kW PEP and an antenna unit with a maximum dimension not less than 533 mm; or
MoMu0	b)	a frequency modulated continuous wave (FMCW) Broadband Radar [™] unit. The radar antenna unit shall remain essentially horizontal when the boat is heeled and at least 7 m (23') above the water. Installations in place before January 2006 shall comply as closely as possible with OSR 3.29.11 a).
Mu0	3.29.12	a class A AIS Transponder which either:
Mo0,1,2,3Mu1, 2,3	3.29.13	an AIS Transponder which either:
MoMu0,1,2,3	a)	shares the masthead VHF antenna via a low loss AIS antenna splitter; or
MoMu0,1,2,3	b)	has a dedicated AIS antenna not less than 38 cm $(15'')$ in length mounted with its base not less than 3 m $(10')$ above the Waterline and co-axial feeder cable with not more than 40% power loss

SECTION 4 - PORTABLE EQUIPMENT

	SECTION 4 - PORTABLE EQUIPMENT
	A boat shall have:
4.01	Sail Letters & Numbers
** 4.01.1	Identification on sails which complies with RRS 77 and RRS Appendix G
MoMu0,1,2,3 4.01.2	An alternative means of displaying identification as required under RRS
	Appendix G for a mainsail, to be displayed when none of the numbered sails
	are set
4.02	Search and Rescue Visibility
MoMu0 4.02.1	A 4 m ² (43 ft ²) area of highly-visible pink, orange or yellow on the coachroof
	and/or deck
Mo1Mu1,2 4.02.1	A 1 m ² (11 ft ²) solid area of highly-visible pink, orange or yellow capable of
	being displayed on the coachroof and/or deck.
Mu0,1,2,3,4 4.02.2	A 1 m ² (11 ft ²) area of highly-visible pink, orange or yellow showing when the
	boat is inverted
4.03	Soft Wood Plugs
**	A tapered soft wood plug stowed adjacent to every through-hull opening
4.04	Jackstays and Clipping Points
MoMu0,1,2,3 4.04.1	Permanently Installed fittings for jackstay ends and clipping points
MoMu0,1,2,3 4.04.2	Jackstays which shall:
MoMu0,1,2,3 a)	be independent on each side of the deck
MoMu0,1,2,3 b)	enable a crewmember to move readily between the working areas on deck and
	the cockpit(s) with the minimum of clipping and unclipping operations

MoMu0,1,2,3	c)	have a breaking strength of 2040 kg ($4500\#$) and be uncoated and non-sleeved stainless steel 1 x 19 wire of minimum diameter 5 mm ($3/16"$), webbing or HMPE rope
MoMu0,1,2,3	4.04.3	Clipping points which shall:
MoMu0,1,2,3	a)	be adjacent to stations such as the helm, sheet winches and masts, where crewmembers work
MoMu0,1,2,3	b)	enable a crewmember to clip on before coming on deck and unclip after going below
MoMu0,1,2,3	c)	enable two-thirds of the crew to be simultaneously clipped on without depending on jackstays
Mu0,1,2,3	d)	on a trimaran with a rudder on the outrigger, permit a crewmember to repair the steering mechanism whilst attached to a clipping point
	4.05	Fire Fighting Equipment
**	4.05.1	A fire blanket adjacent to every cooking device
MoMu0	4.05.2	3 fire extinguishers, each with 2 kg of dry powder or equivalent, in different parts of the boat, one system of which is to deal with fire in a machinery space
MoMu1,2,3	4.05.2	2 fire extinguishers, each with 2 kg of dry powder or equivalent, in different parts of the boat
MoMu4	4.05.2	2 fire extinguishers in different parts of the boat
	4.06	Anchors
MoMu0	4.06.1	Anchors, chain and rope which comply with relevant class rules or the rules of a recognised Classification Society (e.g. Lloyd's, DNV, etc.)
MoMu1,2,3	4.06.2	2 un-modified anchors that meet the anchor manufacturer's recommendation based on the boat's dimensions with suitable combination of chain and rope, ready for immediate assembly, and ready for deployment within 5 minutes except that for a boat less than 8.5 m (28') LH there shall be 1 anchor meeting
MoMu4	4.06.2	the same criteria. 1 un-modified anchor that meets the anchor manufacturer's recommendation based on the boat's dimensions with suitable combination of chain and rope, ready for immediate assembly, and ready for deployment within 5 minutes.
**	4.07	Flashlights and Searchlights
MoMu0,1,2,3	a)	Watertight lights with spare batteries and bulbs as follows: a searchlight, suitable for searching for a person overboard at night and for collision avoidance
MoMu0,1,2,3	b)	a flashlight in addition to 4.07 a)
Mu3,4	c)	the watertight flashlight in OSR 4.07 b) shall be stowed in the grab bag or
1-105, 1	C)	emergency container
MoMu0	d)	a high-intensity heavy duty searchlight powered by the boat's batteries, instantly available for use on deck and in the cockpit
	4.08	First Aid Manual and First Aid Kit
**		A First Aid Manual and First Aid Kit. The contents and storage of the First Aid
		Kit shall reflect the likely conditions and duration of the passage, and the
		number of crew
	4.09	Foghorn
**		A foghorn
	4.10	Radar Reflector
**	4.10.1	A passive radar reflector with:
**	a)	octahedral circular plates of minimum diameter 30 cm (12"), or
**	b)	octahedral rectangular plates of minimum diagonal dimension 40 cm (16"), or
**	c)	a non-octahedral reflector with a documented Root Mean Square minimum Radar Cross Section (RCS) area of 2 m 2 (22 ft 2) from 0-360 $^\circ$ of azimuth and $\pm 20^\circ$ of heel
MoMu0	4.10.2	A Radar Target Enhancer (RTE) which complies with ISO 8729-2:2009 or equivalent
	4.11	Navigation Equipment
MoMu0,1,2,3	4.11.1	Navigational charts (not solely electronic), light list and chart plotting equipment

MoMu4	4.11.2	Navigational charts, light list and chart plotting equipment. If electronic-only,
		an independent alternative shall be on board.
	4.12	Safety Equipment Location Chart
**		A safety equipment location diagram in durable waterproof material, clearly
		displayed in the main accommodation, marked with the location of principal
	4.12	items of safety equipment
MaMuO 1 2 2	4.13 4.13.1	Depth, Speed and Distance Instruments
MoMu0,1,2,3 MoMu,1,2,3,4	4.13.1	A knotmeter or distance measuring instrument (log) A depth sounder
MoMu0	4.13.2	Two independent depth sounders
Horido	4.14	Spare Number
	4.15	Emergency Steering
MoMu0,1,2,3	4.15.1	An emergency tiller capable of being fitted to the rudder stock except when
MoMu0,1,2,3	a)	the principal method of steering is by means of an unbreakable metal tiller
MoMu0,1,2,3	b)	there are two methods (e.g. tillers, wheels) of controlling a rudder, neither of
		which shares components with the other except for the rudder stock.
MoMu0,1,2,3	4.15.2	A proven method of emergency steering with the rudder disabled
**	4.16	Tools and Spare Parts
**	4.16.1 4.16.2	Tools and spare parts, suitable for the duration and nature of the passage An effective means to quickly disconnect or sever the standing rigging from the
	7.10.2	boat
	4.17	Boat's name
**		The boat's name on miscellaneous buoyant equipment, such as lifejackets,
		cushions, lifebuoys, recovery slings, grab bags etc.
	4.18	Retro-reflective material
**		Marine grade retro-reflective material on lifebuoys, recovery slings, liferafts and
		lifejackets
MaM	4.19	EPIRBs
MoMu0 MoMu1,2	4.19.1 4.19.1	Two water and manually activated 406 MHz EPIRBs A water and manually activated 406 MHz EPIRB
MoMu0,1,2	4.19.2	A 406 MHz EPIRB registered after 2015 shall include an internal GPS
MoMu0,1,2	4.19.3	All EPIRBs registered with the appropriate authority associated with the country
		code in the hexadecimal identification (15 Hex ID) of the beacon. A beacon can
		be registered online with the Cospas-Sarsat IBRD if the country does not
		provide a registration facility and the country has allowed direct registration in
	4.00	the IBRD
	4.20	Liferafts
MoMu1,2	4.20.1 a)	Liferaft Construction One or more inflatable liferafts with a total capacity to accommodate at least
1401411,2	a)	the total number of people on board which complies with:
MoMu1,2	i	SOLAS LSA Code 1997 Chapter IV or later version; or
MoMu1,2	ii	ISO 9650-1:2005, Type 1, Group A - Small Craft - Inflatable; or
MoMu1,2	iii	ISAF liferafts manufactured before 2016 until replacement is due at end of
		service life; or
MoMu1,2	iv	ORC liferafts manufactured before 2003 until replacement is due at end of
MaMuO	ы	service life A sufficient number of liferafts so that in the event of any one liferaft being lost
MoMu0	b)	A sufficient number of liferafts so that in the event of any one liferaft being lost or rendered unserviceable, sufficient aggregate capacity remains for all
		crewmembers
MoMu0	c)	Liferafts shall comply with SOLAS LSA code 1997 Chapter IV or later version
	4.20.2	Minimum Liferaft Equipment
MoMu0,1,2	a)	A SOLAS liferaft shall contain as a minimum a SOLAS A pack;
MoMu1	b)	An ISO 9650 liferaft shall contain as a minimum Pack 1 (greater than 24 hour
		pack);
MoMu2	c)	An ISO 9650 liferaft shall contain as a minimum Pack 2 (less than 24 hour
MoMu1,2	d)	pack); The minimum contents of the ISO liferaft equipment packs are listed below.
11011u1,Z	u)	The minimum contents of the 150 inerall equipment packs are listed below.

Not all items are necessarily packed within the liferaft. Some items are permitted to be carried within an accompanying waterproof grab bag which shall be in a readily accessible location:

Equipment	Pack 1 > 24h	Pack 2 < 24h	In liferaft	In liferaft or in grab bag
Portable buoyant baler easily operable by hand	1	1	X	
Sponge	2	2	X	
Pair of buoyant paddles with handles (not mitts) tied into raft adjacent to an entrance	1	1	X	
First-Aid Kit including at least 2 tubes of sunscreen. All dressings must be capable of being effectively used in wet conditions. The first aid kit shall be clearly marked and shall be re-sealable.	1	0		X
Whistle	1	1	X	
Waterproof torch with 6 h duration and separate battery and bulb or complementary torch	2	1	X	
Signalling mirror	1	1	X	
Anti-seasickness pills, per person	6	6		Χ
Seasickness bag with simple effective closure system, per person	1	1		X
Red hand flares in accordance with SOLAS LSA Code Chapter III, 3.2	6	3	3 min	X
Red parachute flares in accordance with SOLAS LSA Code Chapter III, 3.1	2	2	1 min	X
Thermal protective aids in accordance with SOLAS LSA Code Chapter III, 2.5	2	0		X
Repair outfit to enable survivors to repair leaks in any or all of the inflatable compartments. Repair systems must work when wet and be capable of being applied during violent motion.	1	1	X	
Air pump or bellows which shall be simple, robust and complete, with all necessary connections (loose parts shall be captive to the main apparatus) ready for instant use to enable air to be pumped into any or all of the inflatable compartments. The air pump or bellows shall be designed and built specifically for easy operation by hand	1	1	X	
Drinking water per person, in containers of each not more than 500mL	1.5 L	0	X 0.5 L	Xª
Food per person	10 000 kJ	0		X
^a Drinking water in the grab bag (if any) may be replaced with a desalinator device				

4.20.3 Liferaft Packing and Stowage

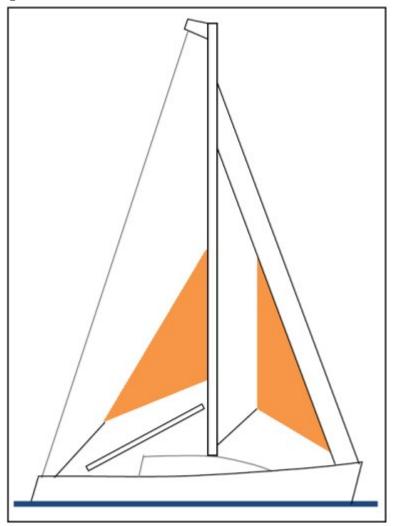
- a) Each liferaft shall be packed either in:
 - i a rigid container securely stowed on the working deck, in the cockpit or in an open space; or:

MoMu0,1,2 MoMu0,	MoMu0,1,2	ii	a rigid container or valise securely stowed in a dedicated weather tight locker
moMu0,1,2 b) In a boat with primary launch before June 2001, a liferaft may be packed in a valise not exceeding 40 kg securely stowed below deck adjacent to a companionway MoMu0,1,2 d) The end of each liferaft painter should be securely fastened to the boat Each raft shall be readily deployable whether or not the boat is inverted The end of each liferaft painter should be securely fastened to the boat Each raft shall be capable of being got to the lifelines or launched within 15 seconds 4.20.4 Spare Number 4.20.5 Liferaft Servicing MoMu0,1,2 ii Josepa Number Josepa Nu	1401410,1,2	11	
MoMu0,1,2			
walise not exceeding 40 kg securely stowed below deck adjacent to a companionway On a multihull or on a monohull with moveable ballast the liferaft shall be readily deployable whether or not the boat is inverted The end of each liferaft painter should be securely fastened to the boat Each raft shall be capable of being got to the lifelines or launched within 15 seconds 4.20.4 Spare Number 4.20.5 Liferaft Servicing MoMu0,1,2 is SolLas liferafts annually MoMu0,1,2 iii ISO 9550 canister packed liferafts every 3 years MoMu0,1,2 iii ISO 9550 valise packed liferafts every 3 years except that hired liferafts shall be serviced annually MoMu0,1,2 vo RC liferafts annually MoMu0,4 vo RC liferafts annually MoMu0,5 vo RC lif	MoMu1.2	h)	· · · · · · · · · · · · · · · · · · ·
MoMu0,1,2 c) Con a multihull or on a monohull with moveable ballast the liferaft shall be readily deployable whether or not the boat is inverted The end of each liferaft painter should be securely fastened to the boat Each raft shall be capable of being got to the lifelines or launched within 15 seconds 4.20.4 4.20.5 MoMu0,1,2 a) Spare Number Liferaft Servicing Aliferaft shall be serviced at a manufacturer authorized service station at the following maximum intervals: SOLAS liferafts annually MoMu0,1,2 iii SO 9550 valise packed liferafts every 3 years MoMu0,1,2 iii SO 9550 valise packed liferafts every 3 years except that hired liferafts shall be serviced annually MoMu0,1,2 v OSC liferafts annually MoMu	1101141,2	D)	
MoMu0,1,2 d) MoMu0,1,2 d) MoMu0,1,2 d) MoMu0,1,2 e) MoMu0,1,2 d) MoMu0,1,2 d) MoMu0,1,2 a) MoMu0,1,2 ii MoMu0,1,2 ii MoMu0,1,2 iii MoMu0,1,2 iiii MoMu0,1,2 iiii MoMu0,1,2 iiiiii MoMu0,1,2 iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii			
moMu0,1,2 d) MoMu0,1,2 e) MoMu0,1,2 e) MoMu0,1,2 e) 4.20.4 4.20.5 MoMu0,1,2 a) MoMu0,1,2 ii MoMu0,1,2 iii MoMu0,1,2 iii MoMu0,1,2 iiii MoMu0,1,2 iiii MoMu0,1,2 iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	MoMu0,1,2	c)	·
MoMu0,1,2 e) Each raft shall be capable of being got to the lifelines or launched within 15 seconds 4.20.4 4.20.5 MoMu0,1,2 a) Alferaft Servicing MoMu0,1,2 ii iii SO 9550 canister packed liferafts every 3 years MoMu0,1,2 iii SO 9550 valise packed liferafts every 3 years except that hired liferafts shall be serviced at a manufacturer authorized service station at the following maximum intervals: MoMu0,1,2 iii SO 9550 valise packed liferafts every 3 years MoMu0,1,2 vo ORC liferafts annually MoMu0,1,2 vo ORC liferafts every 3 years except that hired liferafts shall be serviced annually Servicing certificates (original or a copy) on board 4.21 Grab Bags Either a watertight compartment or a grab bag, readily accessible whether or not the boat is inverted, with the following minimum contents: a watertight flashlight with spare batteries and bulb 3 red hand flares a watertight flashlight with spare batteries and bulb 3 red hand flares a knife 1 f a grab bag is provided it shall have inherent flotation, at least 0.1 m² (1 ft²) area of fluorescent orange colour on the outside, shall be marked with the name of the boat, and shall have a lanyard and clip An AIS personal crew overboard beacon for each crew member An AIS personal crew overboard beacon for each crew member An AIS personal unit in addition to the PLB in OSR 4.22.1 b) if the location device carried by the boat in accordance with OSR 3.29.07 requires it; Where possible every PLB shall be registered with the appropriate authority associated with the country code in the hexadecimal identification (15 fets zi) of the beacon. A beacon can be registered online with the Cospas-Sarsat IBRD if the country does not provide a registration facility and the country has allowed direct registration in the IBRD. GPS capable of recording a crew overboard position		-,	
Each raft shall be capable of being got to the lifelines or launched within 15 seconds	MoMu0,1,2	d)	
4.20.4 Spare Number Liferaft Servicing A 10.5 Liferaft Servicing A Iferaft shall be serviced at a manufacturer authorized service station at the following maximum intervals: SOLAS liferafts annually ISO 9650 canister packed liferafts every 3 years except that hired liferafts shall be serviced annually ISO 9650 valise packed liferafts every 3 years except that hired liferafts shall be serviced annually ORC liferafts annually ORC liferafts annually Servicing certificates (original or a copy) on board Grab Bags Either a watertight compartment or a grab bag, readily accessible whether or not the boat is inverted, with the following minimum contents: a watertight flashlight with spare batteries and bulb 3 red hand flares a watertight flashlight with spare batteries and bulb 3 red hand flares a watertight strobe light with spare batteries a knife f a grab bag is provided it shall have inherent flotation, at least 0.1 m² (1 ft²) area of fluorescent orange colour on the outside, shall be marked with the name of the boat, and shall have a lanyard and clip Crew Overboard Identification and Recovery 4.221 Locator Beacon A PLB (Personal Locator Beacon) equipped with 406Mhz and 121.5Mhz for each crew member A personal unit in addition to the PLB in OSR 4.22.1 b) if the location device carried by the boat in accordance with OSR 3.29.07 requires it; Where possible every PLB shall be registered with the appropriate authority associated with the country code in the hexadecimal identification (15 Hex ID) of the beacon. A beacon can be registration facility and the country has allowed direct registration in the IBRD. 4.22.2 GPS Crew Overboard Position A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position, and connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and silfebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsm	• •		·
MoMu0,1,2 a) A liferaft Servicing A liferaft shall be serviced at a manufacturer authorized service station at the following maximum intervals: SOLAS liferafts annually SOLAS liferafts annually MoMu0,1,2 iii ISO 9650 canister packed liferafts every 3 years except that hired liferafts shall be serviced annually SAF liferafts annually NoMu0,1,2 NoMu0,1,2 NoMu0,1,2 NoMu0,1,2 NoMu0,1,2 NoMu0,1,2 NoMu3,4 No3Mu3,4 No3Mu		-	seconds
MoMu0,1,2 MoMu0 MoMu			Spare Number
following maximum intervals: SOLAS liferafts annually MoMu0,1,2 iii ISO 9650 canister packed liferafts every 3 years ISO 9650 valise packed liferafts every 3 years except that hired liferafts shall be serviced annually MoMu0,1,2 MoMu0,1,2 MoMu0,1,2 MoMu0,1,2 MoMu0,1,2 MoMu0,1,2 MoMu0,1,2 MoMu0,1,2 MoMu0,1,2 MoMu3,4 a) Reprincipable and watertight compartment or a grab bag, readily accessible whether or not the boat is inverted, with the following minimum contents: a watertight hand-held marine VHF transceiver with spare batteries a watertight fashlight with spare batteries and bulb 3 red hand flares 3 red hand flares 1 ff a grab bag is provided it shall have inherent flotation, at least 0.1 m² (1 ft²) area of fluorescent orange colour on the outside, shall be marked with the name of the boat, and shall have a lanyard and clip 4.22 Crew Overboard Identification and Recovery 4.22.1 Locator Beacons 4 PLB (Personal Locator Beacon) equipped with 406Mbz and 121.5Mbz for each crew member MoMu0,1,2 MoMu0,			
MoMu0,1,2 ii SOLAS liferafts annually MoMu0,1,2 iii ISO 9650 canister packed liferafts every 3 years except that hired liferafts shall be serviced annually MoMu0,1,2 iv ISAF liferafts annually MoMu0,1,2 v ORC liferafts annually MoMu0,1,2 b) Servicing certificates (original or a copy) on board 4.21 Grab Bags Either a watertight compartment or a grab bag, readily accessible whether or not the boat is inverted, with the following minimum contents: Mo3Mu3,4 b) a watertight thand-held marine VHF transceiver with spare batteries a watertight strobe light with spare batteries and bulb Mo3Mu3,4 b) a watertight strobe light with spare batteries Mo3Mu3,4 e) a watertight strobe light with spare batteries wish a knife *** f) If a grab bag is provided it shall have inherent flotation, at least 0.1 m² (1 ft²) area of fluorescent orange colour on the outside, shall be marked with the name of the boat, and shall have a lanyard and clip MoMu0 a) A PLB (Personal Locator Beacon) MoMu0,1,2 b) A PLB (Personal Locator Beacon) equipped with 406Mhz and 121.5Mhz for each crew member MoMu0,1,2 d) A person	MoMu0,1,2	a)	
MoMu0,1,2 MoMu0 MoMu0 MoMu0 MoMu0,1,2 MoMu0 MoMu0 MoMu0 MoMu0 MoMu0,1,2 MoMu0,1,2 MoMu0		_	
MoMu0,1,2 MoMu3,4 MoMu			•
be serviced annually ISAF liferafts annually MoMu0,1,2 MoMu0 A.21 MoMu0 MoMu0,1,2 MoMu0 MoMu0 MoMu0 MoMu0 MoMu0 MoMu0,1,2 MoMu0 Mo			· · · · · · · · · · · · · · · · · · ·
MoMu0,1,2 MoMu3,4 Mo3Mu3,4 Mo3Mu0 MoMu0	MoMu0,1,2	III	, , , ,
MoMu0,1,2 MoMu0 MoMu0 MoMu0,1,2 MoMu0 Mo	MaMuO 1 2	is a	•
MoMu0,1,2 Mo3Mu3,4 Mo3Mu0 MoMu0 MoMu0 MoMu0 MoMu0 MoMu0 MoMu0 MoMu0,1,2 MoMu0,1,2 MoMu0,1,2 MoMu0,1,2 MoMu0,1,2 MoMu0,1,2 MoMu0,1,2 MoMu0,1,2 MoMu0,1,2 MoMu0 MoMu0,1,2 MoMu0,1,2 MoMu0 MoMu0 MoMu0,1,2 MoMu0 MoMu			,
Mo3Mu3,4 Mo3			,
Mo3Mu3,4 ** ** ** ** ** ** ** ** **	141014100,1,2		
Mo3Mu3,4 a) not the boat is inverted, with the following minimum contents: Mo3Mu3,4 b) a watertight hand-held marine VHF transceiver with spare batteries Mo3Mu3,4 c) 3 red hand flares Mo3Mu3,4 d) a watertight strobe light with spare batteries Mo3Mu3,4 e) a knife f) If a grab bag is provided it shall have inherent flotation, at least 0.1 m² (1 ft²) area of fluorescent orange colour on the outside, shall be marked with the name of the boat, and shall have a lanyard and clip 4.22 Crew Overboard Identification and Recovery 4.22.1 Locator Beacons MoMu0 a) A PLB (Personal Locator Beacon) equipped with 406Mhz and 121.5Mhz for each crew member MoMu0,1,2 b) An AIS personal crew overboard beacon for each crew member MoMu0 c) A personal unit in addition to the PLB in OSR 4.22.1 b) if the location device carried by the boat in accordance with OSR 3.29.07 requires it; MoMu0,1,2 d) Where possible every PLB shall be registered with the appropriate authority associated with the country code in the hexadecimal identification (15 Hex ID) of the beacon. A beacon can be registered online with the Cospas-Sarsat IBRD if the country does not provide a registration facility and the country has allowed direct registration in the IBRD. MoMu	Mo3Mu3 4	7.21	
Mo3Mu3,4 b) a watertight hand-held marine VHF transceiver with spare batteries a watertight flashlight with spare batteries and bulb do 3 red hand flares a watertight strobe light with spare batteries and bulb do 3 red hand flares a watertight strobe light with spare batteries a knife fl a grab bag is provided it shall have inherent flotation, at least 0.1 m² (1 ft²) area of fluorescent orange colour on the outside, shall be marked with the name of the boat, and shall have a lanyard and clip area of fluorescent orange colour on the outside, shall be marked with the name of the boat, and shall have a lanyard and clip crew member locator Beacons A PLB (Personal Locator Beacon) equipped with 406Mhz and 121.5Mhz for each crew member An AIS personal crew overboard beacon for each crew member A personal unit in addition to the PLB in OSR 4.22.1 b) if the location device carried by the boat in accordance with OSR 3.29.07 requires it; where possible every PLB shall be registered with the appropriate authority associated with the country code in the hexadecimal identification (15 Hex ID) of the beacon. A beacon can be registered online with the Cospas-Sarsat IBRD if the country does not provide a registration facility and the country has allowed direct registration in the IBRD. 4.22.2 GPS Crew Overboard Position MoMu0 b) Connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 c) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue	11031103, 1		
Mo3Mu3,4 Mo3Mu3,4 Mo3Mu3,4 Mo3Mu3,4 d) a watertight flashlight with spare batteries and bulb Mo3Mu3,4 d) a watertight strobe light with spare batteries e) a knife f) If a grab bag is provided it shall have inherent flotation, at least 0.1 m² (1 ft²) area of fluorescent orange colour on the outside, shall be marked with the name of the boat, and shall have a lanyard and dip Crew Overboard Identification and Recovery Locator Beacons A PLB (Personal Locator Beacon) equipped with 406Mhz and 121.5Mhz for each crew member An AIS personal crew overboard beacon for each crew member An AIS personal unit in addition to the PLB in OSR 4.22.1 b) if the location device carried by the boat in accordance with OSR 3.29.07 requires it; Where possible every PLB shall be registered with the appropriate authority associated with the country code in the hexadecimal identification (15 Hex ID) of the beacon. A beacon can be registered online with the Cospas-Sarsat IBRD if the country does not provide a registration facility and the country has allowed direct registration in the IBRD. 4.22.2 GPS Crew Overboard Position A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position, and connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 c) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position a propriate signal to the GPS A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue	Mo3Mu3.4	a)	
Mo3Mu3,4 Mo3	· · · · · · · · · · · · · · · · · · ·	•	· · · · · · · · · · · · · · · · · · ·
Mo3Mu3,4 Mo3Mu3,4 e) a watertight strobe light with spare batteries a knife f) If a grab bag is provided it shall have inherent flotation, at least 0.1 m² (1 ft²) area of fluorescent orange colour on the outside, shall be marked with the name of the boat, and shall have a lanyard and clip 4.22 Crew Overboard Identification and Recovery 4.22.1 Locator Beacons a) A PLB (Personal Locator Beacon) equipped with 406Mhz and 121.5Mhz for each crew member MoMu0,1,2 b) An AIS personal crew overboard beacon for each crew member MoMu0,1,2 d) Where possible every PLB shall be registered with the appropriate authority associated with the country code in the hexadecimal identification (15 Hex ID) of the beacon. A beacon can be registered online with the Cospas-Sarsat IBRD if the country does not provide a registration facility and the country has allowed direct registration in the IBRD. 4.22.2 GPS Crew Overboard Position MoMu0 b) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position, and MoMu1,2 c) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue	· ·	•	
Mo3Mu3,4 ** f) If a grab bag is provided it shall have inherent flotation, at least 0.1 m² (1 ft²) area of fluorescent orange colour on the outside, shall be marked with the name of the boat, and shall have a lanyard and clip Crew Overboard Identification and Recovery 4.22.1 Locator Beacons A PLB (Personal Locator Beacon) equipped with 406Mhz and 121.5Mhz for each crew member MoMu0,1,2 b) An AIS personal crew overboard beacon for each crew member MoMu0 c) A personal unit in addition to the PLB in OSR 4.22.1 b) if the location device carried by the boat in accordance with OSR 3.29.07 requires it; MoMu0,1,2 d) Where possible every PLB shall be registered with the appropriate authority associated with the country code in the hexadecimal identification (15 Hex ID) of the beacon. A beacon can be registered online with the Cospas-Sarsat IBRD if the country does not provide a registration facility and the country has allowed direct registration in the IBRD. 4.22.2 GPS Crew Overboard Position A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position, and MoMu0 b) connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 c) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue	· ·		a watertight strobe light with spare batteries
f) If a grab bag is provided it shall have inherent flotation, at least 0.1 m² (1 ft²) area of fluorescent orange colour on the outside, shall be marked with the name of the boat, and shall have a lanyard and clip 4.22 Crew Overboard Identification and Recovery 4.22.1 Locator Beacons MoMu0 a) A PLB (Personal Locator Beacon) equipped with 406Mhz and 121.5Mhz for each crew member MoMu0,1,2 MoMu0 b) An AIS personal crew overboard beacon for each crew member A personal unit in addition to the PLB in OSR 4.22.1 b) if the location device carried by the boat in accordance with OSR 3.29.07 requires it; MoMu0,1,2 d) Where possible every PLB shall be registered with the appropriate authority associated with the country code in the hexadecimal identification (15 Hex ID) of the beacon. A beacon can be registered online with the Cospas-Sarsat IBRD if the country does not provide a registration facility and the country has allowed direct registration in the IBRD. 4.22.2 GPS Crew Overboard Position 4.22.2 GPS crew Overboard Position A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position, and MoMu0 b) connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 c) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue	•	•	
name of the boat, and shall have a lanyard and clip 4.22	**		If a grab bag is provided it shall have inherent flotation, at least 0.1 m ² (1 ft ²)
 4.22			area of fluorescent orange colour on the outside, shall be marked with the
 4.22.1 Locator Beacons A PLB (Personal Locator Beacon) equipped with 406Mhz and 121.5Mhz for each crew member MoMu0,1,2 A personal crew overboard beacon for each crew member A personal unit in addition to the PLB in OSR 4.22.1 b) if the location device carried by the boat in accordance with OSR 3.29.07 requires it; MoMu0,1,2 Where possible every PLB shall be registered with the appropriate authority associated with the country code in the hexadecimal identification (15 Hex ID) of the beacon. A beacon can be registered online with the Cospas-Sarsat IBRD if the country does not provide a registration facility and the country has allowed direct registration in the IBRD. 4.22.2 GPS Crew Overboard Position A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position, and MoMu0 b) connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 C) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue 			
 MoMu0 a) A PLB (Personal Locator Beacon) equipped with 406Mhz and 121.5Mhz for each crew member MoMu0,1,2 b) An AIS personal crew overboard beacon for each crew member A personal unit in addition to the PLB in OSR 4.22.1 b) if the location device carried by the boat in accordance with OSR 3.29.07 requires it; MoMu0,1,2 d) Where possible every PLB shall be registered with the appropriate authority associated with the country code in the hexadecimal identification (15 Hex ID) of the beacon. A beacon can be registered online with the Cospas-Sarsat IBRD if the country does not provide a registration facility and the country has allowed direct registration in the IBRD. 4.22.2 GPS Crew Overboard Position A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position, and MoMu0 b) connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 c) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue 			• • • • • • • • • • • • • • • • • • •
crew member MoMu0,1,2 MoMu0 c) A personal crew overboard beacon for each crew member A personal unit in addition to the PLB in OSR 4.22.1 b) if the location device carried by the boat in accordance with OSR 3.29.07 requires it; MoMu0,1,2 d) Where possible every PLB shall be registered with the appropriate authority associated with the country code in the hexadecimal identification (15 Hex ID) of the beacon. A beacon can be registered online with the Cospas-Sarsat IBRD if the country does not provide a registration facility and the country has allowed direct registration in the IBRD. 4.22.2 GPS Crew Overboard Position A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position, and MoMu0 b) connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 c) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue			
 MoMu0,1,2 MoMu0 C) A personal unit in addition to the PLB in OSR 4.22.1 b) if the location device carried by the boat in accordance with OSR 3.29.07 requires it; MoMu0,1,2 Mhere possible every PLB shall be registered with the appropriate authority associated with the country code in the hexadecimal identification (15 Hex ID) of the beacon. A beacon can be registered online with the Cospas-Sarsat IBRD if the country does not provide a registration facility and the country has allowed direct registration in the IBRD. 4.22.2 GPS Crew Overboard Position MoMu0 A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position, and MoMu0 Connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue 	MoMu0	a)	, , , , , , , , , , , , , , , , , , , ,
MoMu0 c) A personal unit in addition to the PLB in OSR 4.22.1 b) if the location device carried by the boat in accordance with OSR 3.29.07 requires it; MoMu0,1,2 d) Where possible every PLB shall be registered with the appropriate authority associated with the country code in the hexadecimal identification (15 Hex ID) of the beacon. A beacon can be registered online with the Cospas-Sarsat IBRD if the country does not provide a registration facility and the country has allowed direct registration in the IBRD. 4.22.2 GPS Crew Overboard Position A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position, and b) connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 c) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue	MaMile 1 2	L .\	
carried by the boat in accordance with OSR 3.29.07 requires it; MoMu0,1,2 d) Where possible every PLB shall be registered with the appropriate authority associated with the country code in the hexadecimal identification (15 Hex ID) of the beacon. A beacon can be registered online with the Cospas-Sarsat IBRD if the country does not provide a registration facility and the country has allowed direct registration in the IBRD. 4.22.2 GPS Crew Overboard Position A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position, and b) connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 c) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue			
MoMu0,1,2 d) Where possible every PLB shall be registered with the appropriate authority associated with the country code in the hexadecimal identification (15 Hex ID) of the beacon. A beacon can be registered online with the Cospas-Sarsat IBRD if the country does not provide a registration facility and the country has allowed direct registration in the IBRD. 4.22.2 GPS Crew Overboard Position A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position, and connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 c) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue	MOMUO	C)	· · · · · · · · · · · · · · · · · · ·
associated with the country code in the hexadecimal identification (15 Hex ID) of the beacon. A beacon can be registered online with the Cospas-Sarsat IBRD if the country does not provide a registration facility and the country has allowed direct registration in the IBRD. 4.22.2 GPS Crew Overboard Position A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position, and MoMu0 b) connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 c) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue	ΜοΜμΩ 1 2	d)	·
of the beacon. A beacon can be registered online with the Cospas-Sarsat IBRD if the country does not provide a registration facility and the country has allowed direct registration in the IBRD. 4.22.2 GPS Crew Overboard Position A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position, and b) connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 c) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue	1101100,1,2	u)	, , , , , , , , , , , , , , , , , , , ,
if the country does not provide a registration facility and the country has allowed direct registration in the IBRD. 4.22.2 GPS Crew Overboard Position A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position, and b) connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 c) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue			· · · · · · · · · · · · · · · · · · ·
allowed direct registration in the IBRD. 4.22.2 GPS Crew Overboard Position A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position, and b) connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 c) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue			·
 MoMu0 MoMu0 A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position, and b) connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 C) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue 			
MoMu0 b) connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 c) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue		4.22.2	
MoMu0 b) connected to an emergency button immediately accessible to a helmsman which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 c) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue	MoMu0	a)	A GPS capable of recording a crew overboard position, within 10 seconds, and
which will sound an audible alarm in the accommodation and simultaneously send an appropriate signal to the GPS MoMu1,2 c) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue		-	
send an appropriate signal to the GPS A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue	MoMu0	b)	connected to an emergency button immediately accessible to a helmsman
MoMu1,2 c) A GPS capable of recording a crew overboard position, within 10 seconds, and monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue			which will sound an audible alarm in the accommodation and simultaneously
monitoring that position MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue			
MoMu3,4 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue within reach of the helmsman and ready for immediate use 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue	MoMu1,2	c)	
helmsman and ready for immediate use MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue	M - M - 2 4	4 22 2	· ·
MoMu0,1,2 4.22.3 a lifebuoy with a self-igniting light, a whistle and a drogue	MoMu3,4	4.22.3	,
, , , , , , , , , , , , , , , , , , , ,	MaMiro 1.2	4 22 2	•
4.22.4 III addition to 4.22.3 above, within reach of the neimsman and ready for			
	141014101,1,2	4.22.4	in addition to 4.22.5 above, within reach of the helmsman and ready for

Ī			immedia	te use, a second lifebuoy equippe	ed with:
	MoMu0,1,2	a)		e, a drogue, a self-igniting light ar	
	MoMu0,1,2	b)			
	, ,	,	•	lly automatically extended	,
	MoMu0	c)	Each life	buoy shall be equipped with a sa-	chet of fluorescein dye
	MoMu0,1,2	4.22.5	At least	one lifebuoy shall depend entirely	on permanent buoyancy (e.g. foam)
	**	4.22.6	Each infl	atable lifebuoy and any automati	c device shall be tested and serviced
			at interv	als in accordance with its manufa	cturer's instructions
	**	4.22.7			diameter, 15 - 25 m (50 - 75') long,
			•	ccessible to cockpit	
	MoMu0,1,2,3	4.22.8		ery sling which includes a:	
	MoMu0,1,2,3	a)			orter of 4 times LH or 36m (120')
	MoMu0,1,2,3	b)	•	y section (horseshoe) with no les	. , , ,
	MoMu0,1,2,3	c)		n strength capable to hoist a crev	vmember aboard
	aleste	4.23		chnic and Light Signals	
	**				forming to SOLAS LSA Code Chapter
					stamped expiry date (if any) or if no
				ate stamped, not older than 4 year	
		Race Ca		Red Hand Flares LSA III 3.2	Orange Smoke Flares LSA III 3.3
MoMu(MoMu0	1,2,3	4	2
	MoMu4				2
		4.24	Spare No		
		4.25	Cockpit		
	**			, sharp knife, sheathed and secur	•
			•	ccessible from the deck or a cock	•
Į		4.26		& Heavy Weather Sail Invento	-
	**	4004		wing storm & heavy weather sails	•
	MoMu0	4.26.1		trysail (or rotating wing mast if su	
	MoMu1,2	4.26.1			o reduce the luff by at least 50% (or
	MoMu3	4.26.1		wing mast if suitable)	o reduce the luff by at least 40% (or
	MOMUS	4.20.1		wing mast if suitable)	o reduce the full by at least 40% (of
	MoMu4	4.26.1	_		by 12.5% or a heavy-weather jib (or
	1 IOI IU I	1.20.1			eather sail in a boat with no forestay)
	MoMu0,1,2,3	4.26.2	_	eather jib	sacrer san in a boat with no forestay)
	MoMu0,1,2	4.26.3	storm jib	_	

Storm & Heavy Weather Sail Specifications DesignFigure 3 4.27

4.27.1



**	a)	The material of the body of a storm sail purchased after 2013 shall have a highly-visible colour (e.g. dayglo pink, orange or yellow)
**	b)	Aromatic polyamides, carbon and similar fibres shall not be used in a trysail or storm jib but HMPE and similar materials are permitted
**	c)	Sheeting positions on deck for each storm and heavy-weather sail
**	d)	Sheeting positions for the trysail independent of the boom
**	e)	The maximum area of storm and heavy weather sails shall be lesser of the
	,	areas below or as specified by the boat designer or sailmaker
**	f)	For sails made after 2011: Storm and heavy weather jib areas calculated as:
		(0.255 x luff length x (luff perpendicular + 2 x half width))
	4.27.2	A storm trysail with:
MoMu0,1,2	a)	area not greater than 17.5% mainsail hoist (P) x mainsail foot length (E)
MoMu0,1,2	b)	For sails made after 2011: The storm trysail area calculated as (0.5 x leech
		length x shortest distance between tack point and leech)
MoMu0,1,2	c)	no headboard
MoMu0,1,2	d)	no battens
MoMu0,1,2	e)	sail number and letters on both sides, as large as practicable
MoMu0,1,2	f)	in the case of a boat with an in-mast furling mainsail, the storm trysail shall be
		capable of being set while the mainsail is furled
	4.27.3	A heavy-weather jib (or heavy-weather sail in a boat with no forestay) with:
**	a)	area of 13.5% height of the foretriangle squared
**	b)	readily available means, independent of a luff groove, to attach to the stay

		4.27.4	A storm jib with:
	MoMu0,1,2	a)	area of 5% (height of the foretriangle) squared
			maximum luff length 65% of height of foretriangle
	MoMu0,1,2	b)	
	MoMu0,1,2	c)	permanently attached means, independent of a luff groove, to attach to the
ı		4.20	stay
	l	4.28	Drogue, Sea Anchor
	MoMu0		A drogue for deployment over the stern, or a sea anchor or parachute anchor
			for deployment at the bow, complete with all necessary gear (see Appendix K)
		4.29	Deck Bags
	Mo0	4.29.1	If permitted by the Notice of Race, Sailing Instructions or Class Rules, bags for
			storing sails on deck shall be:
	Mo0	a)	so constructed to ensure rapid draining of water
	Mo0	b)	securely fastened in such a way that the integrity of deck fittings e.g.
		,	stanchions and lifelines, is not compromised
		4.30	Emergency Pumps
	Mo0,1,2	4.30.1	either fixed or portable pump to remove ingress water from any compartment.
	Mo0,1,2	a)	This pump shall:
	Mo0,1,2	b)	have a minimum rated capacity of 200 l/min
	Mo0,1,2	c)	be operated by battery, main engine power or a separate engine
	Mo0,1,2	d)	if portable electric-powered, power cables to be terminated with alligator clips
	Mo0,1,2	e)	have sufficient hose to discharge directly overboard or into the cockpit.
	Mo0,1,2	f)	A combination of permanently installed and portable pumps may be combined
		_	to meet the above requirement.

SECTION 5 - PERSONAL EQUIPMENT

SECTION 5 - PERSONAL EQUIPMENT				
		Each crew member shall have:		
	5.01	Lifejacket		
**	5.01.1	A lifejacket which shall:		
**	a) i	if manufactured before 2012 comply with ISO 12402 - 3 (Level 150) or		
		equivalent, including EN 396 or UL 1180 and:		
**	•	if inflatable have a gas inflation system		
**	•	have crotch/thigh straps (ride up prevention system (RUPS))		
MoMu0,1,2	•	have an integral safety harness in compliance with OSR 5.02		
**	ii	if manufactured after 2011 comply with ISO 12402-3 (Level 150) and be fitted		
		with a whistle, lifting loop, reflective material automatic/manual gas inflation		
		system		
**	•	crotch/thigh straps (ride up prevention system (RUPS))		
MoMu0,1,2	•	an integral safety harness in compliance with OSR 5.02		
MoMu0,1,2,3	b)	have an emergency position indicating light in accordance with either ISO		
	,	12402-8 or SOLAS LSA code 2.2.3		
**	c)	be clearly marked with the boat's or wearer's name		
MoMu0,1,2,3	ď)	have a sprayhood in accordance with ISO 12402-8		
MoMu0	e)	have a PLB unit (as with other types of EPIRB, should be properly registered		
	,	with the appropriate authority)		
**	f)	if inflatable, regularly checked for air retention		
MoMu0,1,2,3	5.01.2	A boat shall carry at least one gas inflatable lifejacket spare cylinder and, if		
, , ,		appropriate, spare activation head for each type of lifejacket on board.		
MoMu0,1,2	5.01.3	A boat shall carry at least one spare lifejacket as required in OSR 5.01.1, (a		
		spare PLB described in 5.01.1(e) is not required)		
**	5.01.4	The person in charge shall personally check each lifejacket at least once		
		annually.		
	5.02	Safety Harness and Tethers		
MoMu0,1,2,3	5.02.1	A harness that complies with ISO 12401 or equivalent		
MoMu0,1,2,3	5.02.2	A tether that shall:		
MoMu0,1,2,3	a)	comply with ISO 12401 or equivalent		
MoMu0,1,2,3	b)	not exceed 2 m (6'-6") including the length of the hooks		
MoMu0,1,2,3	c)	have self-closing hooks		
	-,	2 2 2 2 2 2 2		

MoMu0,1,2,3 MoMu0,1,2,3 MoMu0,1,2,3 MoMu0,1,2,3 MoMu0,1,2,3 MoMu0	d) e) 5.02.3 a) b) 5.02.4	have overload indicator flag embedded in the stitching be manufactured after 2000 All of the crew shall have either: a tether not exceeding 1m (3'3") including the length of the hooks, or an intermediate self-closing hook on a 2 m (6'-6") tether a boat shall carry spare harnesses and tethers as required in OSR 5.02 above
MoMu0,1,2,3	5.02.5 5.03	sufficient for at least 10% of the crewmembers (minimum one unit) A tether which has been overloaded shall be replaced Personal Location Lights
MoMu0	5.04	Two packs of miniflares or two personal location lights (either SOLAS or strobe): one to be attached to, or carried on, the person when on deck at night Foul Weather Suits
MoMu0	5.04	A foul weather suit with hood Knife
MoMu0	5.06	A knife, to be worn on the person at all times Flashlight
MoMu0	5.07	A buoyant watertight flashlight Survival Equipment
MoMu0	5.08	an immersion suit (attention is drawn to EN ISO 15027-1 constant wear suits, and EN ISO 15027-2 abandonment suits and the LSA Code Chapter II, 2,3); Diving Equipment
MoMu0	3.00	The boat shall have at least two diving suits each to cover the entire body and including gloves, fins and portable air supplies
		SECTION 6 - TRAINING
MoMu0	6.01.1	Every member of a crew including the Person in Charge shall have undertaken training within the five years before the start of the race in OSR 6.02 Training Topics
MoMu1,2	6.01.2	At least 30% but not fewer than two members of a crew, including the Person in Charge shall have undertaken training within the five years before the start of the race in OSR 6.02 Training Topics
MoMu3	6.01.3	When there are only two crewmembers, at least one shall have undertaken training within the five years before the start of the race in OSR 6.02 Training Topics
MoMu0,1,2	6.01.4	Except as otherwise provided in the Notice of Race, an in-date certificate gained at a World Sailing approved Offshore Personal Survival Training course shall be accepted by a race organizing authority as evidence of compliance with Special Regulation 6.01. See Appendix G - Model Training Course, for further details.
	6.02 6.02.1	Training Topics Giving Assistance to Other Craft
	6.02.2	Personal Safety Gear, theory and practice
	6.02.3 6.02.4	Care and Maintenance of Safety Gear Fire Precautions and Firefighting, theory and practical
	6.02.5 6.02.6	Crew Overboard Identification and Recovery Hypothermia, Cold Shock and Drowning
	6.02.7	Crew Health Marine Weather
	6.02.8 6.02.9	Heavy Weather
	6.02.10 6.02.11	Storm Sails Damage Control
	6.02.12 6.02.13	Search and Rescue Organization Pyrotechnics and Signalling Gear, theory and practical
	6.02.14	Emergency Communications, theory and practical
	6.02.15 6.03	Liferafts and Abandon Ship, theory and practical Spare Number