ANNEX I

ESSENTIAL REQUIREMENTS

A. Essential requirements for the design and construction of products referred to in Article 2(1)

1. WATERCRAFT DESIGN CATEGORIES

Design category	Wind force(Beaufort scale)	Significant wave height(H ⅓, metres)
A	exceeding 8	exceeding 4
B	up to, and including, 8	up to, and including, 4
C	up to, and including, 6	up to, and including, 2
D	up to, and including, 4	up to, and including, 0,3

Explanatory notes:

A. A recreational craft given design category A is considered to be designed for winds that may exceed wind force 8 (Beaufort scale) and significant wave height of 4 m and above but excluding abnormal conditions, such as storm, violent storm, hurricane, tornado and extreme sea conditions or rogue waves.

B. A recreational craft given design category B is considered to be designed for a wind force up to, and including, 8 and significant wave height up to, and including, 4 m.

C. A watercraft given design category C is considered to be designed for a wind force up to, and including, 6 and significant wave height up to, and including, 2 m.

D. A watercraft given design category D is considered to be designed for a wind force up to, and including, 4 and significant wave height up to, and including, 0,3 m, with occasional waves of 0,5 m maximum height.

Watercraft in each design category must be designed and constructed to withstand the parameters in respect of stability, buoyancy, and other relevant essential requirements listed in this Annex, and to have good handling characteristics.

2. GENERAL REQUIREMENTS

2.1. **Watercraft identification**

Each watercraft shall be marked with an identification number including the following information:

(1) country code of the manufacturer,

(2) unique code of the manufacturer assigned by the national authority of the Member State,

(3) unique serial number,

(4) month and year of production,

(5) model year.

Detailed requirements for the identification number referred to in the first paragraph are set out in the relevant harmonised standard.

2.2. **Watercraft builder's plate**

Each watercraft shall carry a permanently affixed plate mounted separately from the watercraft identification number, containing at least the following information:

(a) manufacturer's name, registered trade name or registered trade mark, as well as contact address;

(b) CE marking, as provided for in Article 18;

(c) watercraft design category in accordance with Section 1;

(d) manufacturer's maximum recommended load derived from point 3.6 excluding the weight of the contents of the fixed tanks when full;

(e) number of persons recommended by the manufacturer for which the watercraft was designed.

In the case of post-construction assessment, the contact details and the requirements referred to in point (a) shall include those of the notified body which has carried out the conformity assessment.

2.3. **Protection from falling overboard and means of reboarding**

Watercraft shall be designed to minimise the risks of falling overboard and to facilitate reboarding. Means of reboarding shall be accessible to or deployable by a person in the water unaided.

2.4. **Visibility from the main steering position**

For recreational craft, the main steering position shall give the operator, under normal conditions of use (speed and load), good all-round visibility.

2.5. **Owner's manual**

Each product shall be provided with an owner's manual in accordance with Article 7(7) and Article 9(4). That manual shall provide all the information necessary for safe use of the product drawing particular attention to set up, maintenance, regular operation, prevention of risks and risk management.

3. INTEGRITY AND STRUCTURAL REQUIREMENTS

3.1. **Structure**

The choice and combination of materials and its construction shall ensure that the watercraft is strong enough in all respects. Special attention shall be paid to the design category in accordance with Section 1, and the manufacturer's maximum recommended load in accordance with point 3.6.

3.2. **Stability and freeboard**

The watercraft shall have sufficient stability and freeboard considering its design category in accordance with Section 1 and the manufacturer's maximum recommended load in accordance with point 3.6.

3.3. **Buoyancy and flotation**

The watercraft shall be constructed as to ensure that it has buoyancy characteristics appropriate to its design category in accordance with Section 1 and the manufacturer's maximum

recommended load in accordance with point 3.6. All habitable multihull recreational craft susceptible of inversion shall have sufficient buoyancy to remain afloat in the inverted position.

Watercraft of less than 6 metres in length that are susceptible to swamping when used in their design category shall be provided with appropriate means of flotation in the swamped condition.

3.4. Openings in hull, deck and superstructure

Openings in hull, deck(s) and superstructure shall not impair the structural integrity of the watercraft or its weather tight integrity when closed.

Windows, port lights, doors and hatch covers shall withstand the water pressure likely to be encountered in their specific position, as well as point loads applied by the weight of persons moving on deck.

Through hull fittings designed to allow water passage into the hull or out of the hull, below the waterline corresponding to the manufacturer's maximum recommended load in accordance with point 3.6, shall be fitted with a means of shutoff which shall be readily accessible.

3.5. Flooding

All watercraft shall be designed so as to minimise the risk of sinking.

Where appropriate, particular attention shall be paid to:

(a) cockpits and wells, which should be self-draining or have other means of keeping water out of the watercraft interior;

(b) ventilation fittings;

(c) removal of water by pumps or other means.

3.6. Manufacturer's maximum recommended load

The manufacturer's maximum recommended load (fuel, water, provisions, miscellaneous equipment and people (in kilograms)) for which the watercraft was designed, shall be determined in accordance with the design category (Section 1), stability and freeboard (point 3.2) and buoyancy and flotation (point 3.3).

3.7. Life raft stowage

All recreational craft of design categories A and B, and recreational craft of design categories C and D longer than 6 metres shall be provided with one or more stowage points for a life raft (life rafts) large enough to hold the number of persons the recreational craft was designed to carry as recommended by the manufacturer. Life raft stowage point(s) shall be readily accessible at all times.

3.8. Escape

All habitable multihull recreational craft susceptible of inversion shall be provided with viable means of escape in the event of inversion. Where there is a means of escape provided for use in the inverted position, it shall not compromise the structure (point 3.1), the stability (point 3.2) or buoyancy (point 3.3) whether the recreational craft is upright or inverted.

Every habitable recreational craft shall be provided with viable means of escape in the event of fire.

3.9. Anchoring, mooring and towing

All watercraft, taking into account their design category and their characteristics, shall be fitted with one or more strong points or other means capable of safely accepting anchoring, mooring and towing loads.

4. HANDLING CHARACTERISTICS

The manufacturer shall ensure that the handling characteristics of the watercraft are satisfactory with the most powerful propulsion engine for which the watercraft is designed and constructed. For all propulsion engines, the maximum rated engine power shall be declared in the owner's manual.

5. INSTALLATION REQUIREMENTS

5.1. **Engines and engine compartments**

5.1.1. *Inboard engine*

All inboard mounted engines shall be placed within an enclosure separated from living quarters and installed so as to minimise the risk of fires or spread of fires as well as hazards from toxic fumes, heat, noise or vibrations in the living quarters.

Engine parts and accessories that require frequent inspection and/or servicing shall be readily accessible.

The insulating materials inside the engine compartment shall not sustain combustion.

5.1.2. *Ventilation*

The engine compartment shall be ventilated. The ingress of water into the engine compartment through openings must be minimised.

5.1.3. *Exposed parts*

Unless the engine is protected by a cover or its own enclosure, exposed moving or hot parts of the engine that could cause personal injury shall be effectively shielded.

5.1.4. *Outboard propulsion engine starting*

Every outboard propulsion engine fitted on any watercraft shall have a device to prevent the engine being started in gear, except:

(a) when the engine produces less than 500 Newton's (N) of static thrust;

(b) when the engine has a throttle limiting device to limit thrust to 500 N at the time of starting the engine.

5.1.5. *Personal watercraft running without driver*

Personal watercraft shall be designed either with an automatic propulsion engine cut-off or with an automatic device to provide reduced speed, circular, forward movement when the driver dismounts deliberately or falls overboard.

5.1.6. Tiller-controlled outboard propulsion engines shall be equipped with an emergency stopping device which can be linked to the helmsman.

5.2. **Fuel system**

5.2.1. *General*

The filling, storage, venting and fuel-supply arrangements and installations shall be designed and installed so as to minimise the risk of fire and explosion.

5.2.2. *Fuel tanks*

Fuel tanks, lines and hoses shall be secured and separated or protected from any source of significant heat. The material the tanks are made of and their method of construction shall be in accordance with their capacity and the type of fuel.

Petrol fuel tank spaces shall be ventilated.

Petrol fuel tanks shall not form part of the hull and shall be:

(a) protected against fire from any engine and from all other sources of ignition;

(b) separated from living quarters.

Diesel fuel tanks may be integral with the hull.

5.3. **Electrical system**

Electrical systems shall be designed and installed so as to ensure proper operation of the watercraft under normal conditions of use and shall be such as to minimise risk of fire and electric shock.

All electrical circuits, except engine starting circuits supplied from batteries, shall remain safe when exposed to overload.

Electric propulsion circuits shall not interact with other circuits in such a way that either would fail to operate as intended.

Ventilation shall be provided to prevent the accumulation of explosive gases which might be emitted from batteries. Batteries shall be firmly secured and protected from ingress of water.

5.4. **Steering system**

5.4.1. *General*

Steering and propulsion control systems shall be designed, constructed and installed in order to allow the transmission of steering loads under foreseeable operating conditions.

5.4.2. *Emergency arrangements*

Every sailing recreational craft and single-propulsion engine non-sailing recreational craft with remote-controlled rudder steering systems shall be provided with emergency means of steering the recreational craft at reduced speed.

5.5. **Gas system**

Gas systems for domestic use shall be of the vapour-withdrawal type and shall be designed and installed so as to avoid leaks and the risk of explosion and be capable of being tested for leaks. Materials and components shall be suitable for the specific gas used to withstand the stresses and exposures found in the marine environment.

Each gas appliance intended by the manufacturer for the application for which it is used shall be so installed in accordance with the manufacturer’s instructions. Each gas-consuming appliance must be supplied by a separate branch of the distribution system, and each appliance must be controlled by a separate closing device. Adequate ventilation must be provided to prevent hazards from leaks and products of combustion.

All watercraft with a permanently installed gas system shall be fitted with an enclosure to contain all gas cylinders. The enclosure shall be separated from the living quarters, accessible only from the outside and ventilated to the outside so that any escaping gas drains overboard.

In particular, any permanently installed gas system shall be tested after installation.

5.6. **Fire protection**

5.6.1. *General*

The type of equipment installed and the layout of the watercraft shall take account of the risk and spread of fire. Special attention shall be paid to the surroundings of open flame devices, hot areas or engines and auxiliary machines, oil and fuel overflows, uncovered oil and fuel pipes and routing of electrical wiring in particular away from heat sources and hot areas.

5.6.2. *Fire-fighting equipment*

Recreational craft shall be supplied with fire-fighting equipment appropriate to the fire hazard, or the position and capacity of fire-fighting equipment appropriate to the fire hazard shall be indicated. The craft shall not be put into service until the appropriate fire-fighting equipment is in place. Petrol engine compartments shall be protected by a fire extinguishing system that avoids the need to open the compartment in the event of fire. Where fitted, portable fire extinguishers shall be readily accessible and one shall be so positioned that it can easily be reached from the main steering position of the recreational craft.

5.7. **Navigation lights, shapes and sound signals**

Where navigation lights, shapes and sound signals are fitted, they shall comply with the 1972 COLREG (The International Regulations for Preventing Collisions at Sea) or CEVNI (European Code for Interior Navigations for inland waterways) Regulations as appropriate.

5.8. **Discharge prevention and installations facilitating the delivery ashore of waste**

Watercraft shall be constructed so as to prevent the accidental discharge of pollutants (oil, fuel, etc.) overboard.

Any toilet fitted in a recreational craft shall be connected solely to a holding tank system or water treatment system.

Recreational craft with installed holding tanks shall be fitted with a standard discharge connection to enable pipes of reception facilities to be connected with the recreational craft discharge pipeline.

In addition, any through-the-hull pipes for human waste shall be fitted with valves which are capable of being secured in the closed position.