

# TEST REPORT

**Applicant** : Heemskerk Enterprise

**Address** : Woerden, Breeveld 9 3445BA The Netherlands

**Report on the submitted sample said to be:**

**Sample name** : Inflatable tank

**Model** : Inflatable tank

**Trade Name** : N/A

**Manufacturer** : Henan Junwen Trading Co., Ltd

**Address** : Riyuehui Building, Xihuan Road, Longting District, Kaifeng, Henan, China

**Sample received date** : Jun.06, 2022

**Testing period** : Jun.06, 2022 to Jun.10, 2022

| TEST REQUESTED  | RESULT |
|---|--------|
| EN ISO 25649-1:2017 Part 1: Classification, materials, general requirements and test methods            | PASS   |
| EN ISO 25649-2:2017 Part 2: Consumer information  | PASS   |
| EN ISO 25649-3:2017 Part 3:Additional specific safety requirements and test methods for Class A devices | PASS   |

\*\*\*\*\* FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S) \*\*\*\*\*

**Prepared by(Engineer) :**



**Approved by(Manager) :**



| <b>EN25649-1 Part 1: Floating leisure articles for use on and in the water - Classification, materials, general requirements and test methods</b> |  |                    |   |
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| <b>5</b>  | <b>General safety requirements and test methods related to all classes</b>   |                    |   |
| <b>5.1</b>  | <b>General</b>   |                    |   |
| <b>5.2.1.1</b>  | <b>Introduction</b>  |                    |   |
|   | <p>Floating leisure articles shall not have accessible design features that may cause body entrapment. This requirement is deemed to be met if the following requirements are met and the specified test procedures prove that body entrapment does not occur.</p> <p>Design features i.e. gaps, openings, slots etc. are categorised in design types A to E as shown in Annex A and Annex B. They include features providing fixed interior spaces and such with flexible interior components/spaces and thus variable dimensions. Design features likely to cause entrapment may be arranged in the plane but also in 3-dimensional structures providing considerable height as e.g. ladder structures, labyrinths or body enclosing structures. Testing should be undertaken according to the instructions laid out in this document.</p> |                    | P |
| <b>5.2.1.2</b>  | <b>Accessibility</b>   |                    |   |
|   | Design features accessible to the test person in any stable floating position the product can take on the water.   |                    | P |
| <b>5.2.1.3</b>  | <b>Product categorization regarding age group and body weight of user/test persons/torso templates</b>   |                    |   |
|   | <p>Products shall be labelled with regard to their intended user groups according to ISO 25649-2. With regard to body entrapment floating leisure articles are to be distinguished in two sizes only: child use and adult use: Child use includes age group 3 years to 10 years of age/body weight 18 kg to 45 kg respectively.</p> <p>Products for combined child /adult use or adult use only include all other user groups. According to these user groups the relevant foot and torso probes or the test persons shall be applied for testing.</p>   |                    | P |
| <b>5.2.1.4</b>  | <b>Probes</b>  |                    |   |
| <b>5.2.1.4.1</b>  | <b>Foot probe, child</b>   |                    |   |
|   | Test probe (see Figure 1), 3 years, 5th percentile (smallest foot dimension).  |                    | P |
| <b>5.2.1.4.2</b>  | <b>Torso probes, adult and child</b>   |                    |   |
| <b>5.2.1.4.3</b>  | <b>Test subjects</b>   |                    |   |
|   | Test subject representing the child of 10 years of age: test subject No. 4 according to Table 2. Test subject representing the adult: test subject No. 1 according to Table 2.   | higher than 600 mm | P |
| <b>5.2.2</b>  | <b>Requirements on body entrapment</b>   |                    |   |
|   | When tested in accordance with 5.2.3 all design features of a floating leisure article as e.g.gaps, openings, slots etc. which allow the initial ingress of  |                    | P |

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|              | <p>the foot probe according to 5.2.1.4.1 shall prove that they subsequently allow the free passage of either the appropriate (see 5.2.1.3) test probe (adult/child) according to 5.2.1.4.2 or the relevant test subject according to 5.2.1.4.3.</p> <p>For design features likely to cause body entrapment see categorization of types of openings in Annex B.</p>  |  |   |
| <b>5.2.3</b> | <b>Test procedure</b>   |  |   |
|              | <p>In general testing shall be performed with the probes(child/adult) as specified in 5.2.1.4 which is in cases where the design features likely to cause entrapment allow a simple dimensional check i.e. a pass or not-pass assessment of the template(s). The appropriate test probe shall be applied vertically and pushed into the gaps openings etc. with a force of 100 N. In special cases where body entrapment depends on the flexibility of body enclosing components or where the arrangement of such hazardous design features is too complicated for a simple dimensional check testing shall be done by the appropriate test subject. The procedure shall be an in-water test and shall include access to the hazardous feature in any stable floating position the product can take.</p> <p>Subject tests shall include the following sub sequences:</p> <p>a) appropriate test person is intentionally getting access into the potential entrapment design feature with the intent to pass through;</p> <p>b) head first access, feet first access;</p> <p>c) it shall be checked whether the process of intentionally and actively accessing the feature of entrapment turns itself into an opening movement and thus release of the test person (see Annex B).</p> |  | P |
| <b>5.2.4</b> | <b>Depths of gaps and openings</b>  |  |   |
|              | <p>Openings, gaps, slots etc. are considered as not causing body entrapment if they have a restriction in depth which prevents the user from getting too deep into it. This depth shall not allow an entry of the foot probe according to 5.2.1.4.1 of more than 30 cm for products intended for adult use only and not more as 20 cm for products intended for child use or combined adult and child use.</p>  |  | P |
| <b>5.2.5</b> | <b>Method of measuring</b>  |  |   |
|              | <p>a) The foot probe is put into the potential entrapment design feature in any direction but not more than at an angle from vertical to 45°. The force applied to the foot probe is 100 N max.</p> <p>b) When the probe is blocked the depth of entry from the first contact point to the depth, which is reached after the application of 100 N shall be measured along the virtual line of entry.</p>  |  | P |
| <b>5.3</b>   | <b>Torso entrapment on safety line with regard to children</b>  |  |   |
| <b>5.3.1</b> | <b>Requirements</b>   |  |   |

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|              | The child torso probe as shown in Figure 4 shall pass through the opening between safety line and the hull of the device at any position under the force of its own weight.  |  | P |
| <b>5.3.2</b> | <b>Test method</b>   |  |   |
|              | Put probe for torso entrapment horizontally into the gap between safety line and hull of the inflated structure. Check whether the probe becomes trapped. Test probe, 3 years, 95th percentile (biggest torso dimension, material: pine wood or similar).  |  | P |
| <b>5.4</b>   | <b>Accessible protruding parts causing entanglement</b>  |  |   |
| <b>5.4.1</b> | <b>Requirements</b>  |  |   |
|              | To prevent the user from entanglement when unintentionally sliding out or from a device, there shall be no hazardous protrusions. The test rope shall slip of any part of the device that protrudes in the area where the user intentionally and foreseeably interacts with the product.   |  | P |
| <b>5.4.2</b> | <b>Test method</b>   |  |   |
|              | A loop of the test rope of 8 mm diameter plaited polyester rope as shown in Figure 5 shall be put around the protruding part. The pulling direction in relation to the protruding part shall be vertically to the centre line of this part. With the product in the position to simulate its intended use, apply a pulling force of 180 N either vertically downwards or in a downward direction most likely to cause failure. It shall be checked whether the test rope disengages under any circumstances, such as capsize, slip off, protruding part breakage, etc.   |  | P |
| <b>5.5</b>   | <b>Human subject testing</b>   |  |   |
| <b>5.5.1</b> | <b>General</b>   |  |   |
|              | Testing for all specific parts of ISO 25649 depends highly on testing with human test subjects. Due to the very nature, diversity and disparity of the products concerned instrumental testing by using apparatuses, devices, etc. is not recommended. Also the use of rigid loads and distinct load application points should be replaced by positioning human test subjects. This approach is appropriate to adapt to the flexibility and irregularity of the products. Therefore the determination and selection of an adequate test panel is of utmost importance. The same applies consequently for the assessment panel. Standard Model Cases how to determine and select test panels exist and can be adapted to the needs of this project. |  | P |
| <b>5.5.2</b> | <b>Test panel</b>  |  |   |
|              | Test subject 1 shall always be one time in the total number of adult male test subjects. If more than one test subject shall act, the rest shall be a mix of sex in accordance with Table 2.   |  | P |
| <b>5.5.3</b> | <b>Assessment panel</b>  |  |   |
|              | The tests in the water shall be conducted and assessed by an assessment panel of at least  |  |   |

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|   | <p>three independent technical experts experienced in assessing floating leisure articles. The assessment panel directs the test subjects to take positions and to perform according to the standard's test specifications and pass/fail criteria. The responsible test house staff shall provide measures to avoid any accident during testing.</p>  |  | <p>P</p> |
| <p><b>5.5.4 Positioning and posture of test subjects for testing floating stability (if applicable)</b></p> |   |  |          |
|   | <p>Each test subject shall be positioned:</p> <ul style="list-style-type: none"> <li>— on the intended position if there are distinct seats, sitting or laying areas or other positions for the user;</li> <li>— on the position most likely to cause failure if free movement of users is possible;</li> <li>— with the back leaned to the outer wall if the device provides a clear inner area surrounded by a wall. The posture to be adopted shall be selected from the standard test postures as specified in 5.5.5 and stipulated in detail by ISO 25649-3 to ISO 25649-7. If there are various postures likely to be applied in practical use, the one most likely to cause failure shall be selected from the test postures (see 5.5.5) and applied for testing.</li> </ul>       |  | <p>P</p> |
| <p><b>5.5.5 Basic test postures</b></p>   |   |  |          |
|   | <p>NOTE1 Posture1: upright standing, arms sideways to mid body, body centre line vertical, head upright.<br/>           Posture 1.1 upright standing, arms/hands holding a grab handle, body centre line slightly lent back (7°), feet on surface or climbing fitting.<br/>           Posture 2 kneeling position, torso rests on lower leg, arms/hands on upper legs, body centre line vertical, head upright.<br/>           Posture 3 lying position, entire body stretched out horizontally, feet, legs, torso, arms head on resting surface. Posture 4 sitting position, legs stretched out or bent, hands on knees, torso centre line vertical, head up right.<br/>           NOTE2 For test positions and variations of these basic test postures according to product design,</p> |  | <p>P</p> |

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|              | see ISO 25649-3 to ISO 25649-7, Classes A to D.   |  |   |
| <b>5.6</b>   | <b>Design working pressure</b>  |  |   |
| <b>5.6.1</b> | <b>Requirements</b>   |  |   |
|              | The recommended working pressures (if applicable) shall be specified by the manufacturer for each main buoyancy chamber of the fully inflated device. These pressures shall be indicated on the device and in the operator's instruction manual (see ISO 25649-2). If for any reason working pressure is not given, inflate until full shape and functionality is achieved. Where relevant, the sequence of inflation shall be numbered next to the chamber's inflation valves. In order that the user may ascertain that the specified working pressure has been reached, the manufacturer shall provide appropriate equipment or a pressure gauge for this purpose. Alternatively, instructions shall be included in the operator's instruction booklet, which will enable a sufficiently close estimate to be made.<br><br>The working pressure shall be consistently expressed in bars. |  | P |
| <b>5.6.2</b> | <b>Test method</b>  |  |   |
|              | Visual examination by the test panel.   |  | P |
| <b>5.7</b>   | <b>Load bearing components</b>  |  |   |
| <b>5.7.1</b> | <b>Requirements</b>   |  |   |
|              | If not otherwise stated in the specific parts all load bearing fittings, e.g. lifting and carrying handles, fittings for safety ropes, etc. shall be compatible with the material of the hull itself and shall not, when loaded as described in 5.7.2, break or result in any impairment in air tightness or water integrity.   |  | P |
| <b>5.7.2</b> | <b>Towing device</b>  |  |   |
|              | Any cordage used for test purposes shall have a diameter of 8 mm.<br>Progressively apply a load of 500N to all the earing components in any direction.<br>Maintain it during 1 min.   |  | P |
| <b>5.8</b>   | <b>Load bearing components</b>  |  |   |
| <b>5.8.1</b> | <b>Requirements</b>   |  |   |
|              | If not otherwise stated in the specific parts all load bearing fittings, e.g. lifting and carrying handles, fittings for safety ropes, etc. shall be compatible with the material of the hull itself and shall not, when loaded as described in 5.8.2, break or result in any   |  | P |

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|               | impairment in air tightness or water integrity.<br>Not applicable if the device is marked with safety information symbol "pool use only" according to ISO 25649-2.  |  |   |
| <b>5.8.2</b>  | <b>Test method</b>  |  |   |
|               | Any cordage used for test purposes shall have a diameter of 8 mm. Progressively apply a load of 1 kN to all the pulling components in any direction. Maintain it during 15 min.   |  | P |
| <b>5.9</b>    | <b>Valves and valve adapters</b>  |  |   |
| <b>5.9.1</b>  | <b>Requirements</b>   |  |   |
|               | Inflating and/or deflating valves shall be made of corrosion-resistant materials, shall be compatible with the material of the hull and shall not be capable of damaging the device. EN 16051-1 gives examples how to achieve compatibility valves and inflating devices geometry. They should meet the requirements specified in EN 16051-1. In general, valves shall<br>a) not inconvenience the persons in the device in their predetermined seating positions,<br>b) not interfere with the operation of the device, and<br>c) not be damaged or torn off by moveable components of the device construction.<br>All valves shall enable airtight sealing by manual operation, independent of their sealing or nonreturn valve.<br>For the buoyancy system, valves with a non-return device in accordance with EN 16051-1 should be used. NOTE A specific European Standard dealing with compatibility of valves and valve adapters is currently under development. Each filling valve shall enable a controlled pressure reduction. |  | P |
| <b>5.9.2</b>  | <b>Test method</b>  |  |   |
|               | Visual inspection and practical test. In house or outside test confirmation may be allowed to verify compliance.  |  | P |
| <b>5.9.3</b>  | <b>Numbering of air chambers</b>  |  |   |
|               | If the sequence of air chamber inflation is relevant for function or safety of the product, the correct inflation sequence shall be indicated by numbers in close proximity to the valves.  |  | P |
| <b>5.10</b>   | <b>Edges, corners and points</b>  |  |   |
| <b>5.10.1</b> | <b>Requirements</b>   |  |   |
|               | All devices shall be of a design such that they cannot cause harm to the user. Edges and corners of hard and rigid materials shall be chamfered or rounded. Round edges or corners shall have a minimum radius of 1 mm and where a chamfer is part of the design, it shall be of $(45^\circ \pm 5)$ mm and at least 1 mm in width. There shall be no barbs or other sharp points or features.   |  | P |
| <b>5.10.2</b> | <b>Test method</b>  |  |   |
|               | Testing shall be by measurement and tactile assessment.   |  | P |

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| <b>5.11</b>     | <b>Shearing and crushing points</b>   |  |   |
| <b>5.11.1</b>   | <b>Requirements</b>   |  |   |
|                 | <p>Floating articles not specifically excluding the use by children shall meet the requirements regarding parts moving against each other as specified in EN 71-1:2005, 4.10.1 d) and 4.10.2. Floating articles for adult use only shall have no accessible shearing and/or crushing points. Shearing and crushing points exist if the distance between two rigid movable parts is less than 25 mm.</p> <p>If access to shearing and crushing points is prevented by covers, none of the remaining openings shall allow a 5 mm cylindric probe to be inserted. Not applicable for oars and oar-locks.</p>   |  | P |
| <b>5.11.2</b>   | <b>Test method</b>  |  |   |
|                 | Testing shall be by measurement and tactile assessment  |  | P |
| <b>5.12</b>     | <b>Shearing and crushing points</b>   |  |   |
| <b>5.12.1</b>   | <b>Requirements</b>   |  |   |
|                 | <p>If applicable, the device shall remain airtight after each of the tests below (see 5.12.2 to 5.12.5). All tests shall be performed at a temperature of (20 ± 3) °C, unless specified otherwise.</p>  |  | P |
| <b>5.12.2</b>   | <b>Pressure test</b>  |  |   |
| <b>5.12.2.1</b> | <b>Combined cycle pressure/static load test for devices manufactured from unsupported material</b>  |  |   |
|                 | <p>Inflate all chambers of the device to the design working pressure as instructed by the manufacturer on the product or in the instructions but not less than 0,03 bar or, if no working pressure is given for test purposes a pressure of 0,06 bar is valid and keep the device inflated for 12 h.</p> <p>This test procedure shall be applied alternately to at least two adjoining inflated chambers (chamber 1, chamber 2) in turn as required in Figure 7 and shall comprise 50 inflation/deflation cycles.</p> <p>a) Inflate chamber 1 to a pressure of 1,1 times the design working pressure and keep it for the specified time.</p> <p>b) Deflate chamber 1 to zero pressure and inflate chamber 2 to 1,1 times of the design working pressure and keep it for the specified time.</p> <p>c) Repeat this process for 75 times (pressure tolerance: +10 % to -0 % of applied test pressure)</p> <p>Test the air tightness of all inflated air chambers in accordance with paper strip test in 5.12.4.</p> |  | P |
| <b>5.12.2.2</b> | <b>Overpressure test for inflatables made from reinforced or fabric covered material</b>  |  |   |
|                 | <p>Inflate each compartment of the device to 1,5 times the manufacturer's design working pressure for 30 min. If no design working pressure is given, a pressure of 0,06 bar is valid. For Class D devices, a pressure of only 1,2 times the design pressure applies. No damage or rupture shall occur and the device shall be tested for air tightness as described in 5.12.5.</p> <p>NOTE Flocked film materials do not fall under the category of being "reinforced".</p>  |  | P |
| <b>5.12.3</b>   | <b>Heat test (not applicable to Class D devices)</b>  |  |   |



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|               | <p>Assemble the device in accordance with the manufacturer's instructions and inflate it to a pressure of 1,1 times the design working pressure. If no working pressure is given, a pressure of 0,06 bar shall be used. When assembled, place the device in a heat chamber, set at <math>(60 \pm 2)</math> °C, for a period of 6 h. On completion of the test period, remove the device from the heat chamber and allow to cool down to ambient temperature. Test the air tightness of the device in accordance with the relevant test specified in 5.12.5 for devices manufactured from reinforced material or 5.12.4 for devices manufactured from unsupported material.</p>  |  | P |
| <b>5.12.4</b> | <b>Air tightness test for inflatables made from unsupported material</b>  |  |   |
|               | <p>The air tightness is measured indirectly as shrinkage of the material. Test all chambers for buoyancy individually with all adjacent chambers deflated. Inflate the chamber to be tested for buoyancy to a pressure of 1,1 times the manufacturer's design working pressure. If no working pressure is given, a pressure of 0,06 bar is valid. Immediately stick a strip of paper, approximately 100 mm long, at its ends onto the outer surface of the air chamber in a circumferential direction. Cut the strip in half horizontally. Following a test period of 2 h, there shall be no overlapping of the two cut ends.</p>   |  | P |
| <b>5.12.5</b> | <b>Air tightness test for inflatables made from reinforced or fabric covered material</b>   |  |   |
|               | <p>Support or insulate the device from the floor and do not expose it to any air current and direct sunlight. Inflate the device (all air chambers) for 30 min to a pressure that is 20 % in excess of the manufacturer's design working pressure if indicated in order to pre-stretch the device. Then reset the pressures to the design working pressure for a further period of 30 min in order to stabilize conditions. Reset the pressures to the design working pressure and record the ambient temperature and atmospheric pressure. Following a test period of 24 h, the pressure drop shall not be greater than 20 % in any air chamber. Record the final ambient temperature and atmospheric pressure. The temperature difference between the start of the test and the end of the test shall not exceed <math>\pm 3</math> °C. The atmospheric pressure difference between the start of the test and the test readings shall not exceed <math>\pm 1</math> %. For each rise or fall by 1°C in ambient temperature, an allowance of 0,004 bar may be respectively subtracted from, or added to, the recorded device pressure.</p> |  | P |

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| <b>5.13</b>    | <b>Buckles and other fixings</b>  |  |   |
| <b>5.13.1</b>  | <b>Requirements</b>   |  |   |
|                | If applicable, the device shall remain airtight after each of the tests below (see 5.13.2 to 5.13.5).<br>All tests shall be performed at a temperature of (20 ± 3) °C, unless specified otherwise.  |  | P |
| <b>5.13.2</b>  | <b>Test methods</b>   |  |   |
|                | Verification shall be executed by the test panel. In case of a locking system based on pressure, testing shall be done in accordance with EN 13138-3:2014, Annex E.   |  |   |
| <b>6</b>       | <b>Material requirements and test methods</b>   |  |   |
| <b>6.1</b>     | <b>General</b>  |  |   |
| <b>6.1.1</b>   | <b>Requirements</b>   |  |   |
|                | All materials used in floating leisure articles shall be visually clean and free from contamination. They shall be selected by the manufacturer according to the stresses that are resulting from the intended service conditions and the requirements set out for shape, dimension, maximum load, etc. The use under normal conditions shall not materially impair their performance and they shall meet all the requirements specified in Clause 6 and Clause 7. To avoid rotting, all fibre materials shall not be made from natural fibres like cotton. For conditioning, the test procedure related to immersion in chlorinated salt water (see 6.2.3) and storage in cold and hot conditions (see 6.3) shall be carried out prior to all other tests. |  | P |
| <b>6.1.2</b>   | <b>Test method</b>  |  |   |
|                | Visual inspection and manufacturer's certificate on request.  |  | P |
| <b>6.2</b>     | <b>Chemical requirements for materials making up the hull, unsupported or reinforced</b>  |  |   |
| <b>6.2.1</b>   | <b>General</b>  |  |   |
|                | In house or outside test confirmation may be allowed to verify compliance.  |  | P |
| <b>6.2.2</b>   | <b>Resistance to mineral oil</b>  |  |   |
| <b>6.2.2.1</b> | <b>Requirements</b>   |  |   |
|                | After the contact during a period of (22 ± 0,25)h the change in mass per unit area shall not exceed 100 g/c   |  | P |
| <b>6.2.2.2</b> | <b>Test method</b>  |  |   |
|                | Carry out the test on the external side of the material in contact with the ambient environment as specified in ISO 1817 but with a sample size of 100 mm x 100 mm or a disc of 100 mm diameter by using normal mineral oil for diesel engines at a temperature of (40 ± 1) °C.   |  | P |
| <b>6.2.3</b>   | <b>Resistance to chlorinated salt water</b>   |  |   |
| <b>6.2.3.1</b> | <b>Water absorption</b>   |  |   |
|                | After the contact during a period of minimum 36 h the change in mass per unit area shall not exceed 100 g/m <sup>2</sup>  |  | P |
| <b>6.2.3.2</b> | <b>Test method</b>  |  |   |
|                | Carry out the test on the external side of the material in contact with the ambient environment as  |  | P |

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|                | specified in ISO 1817 by using salt water composed of distilled water and 30 g of sodium chloride per litre at a temperature of $(40 \pm 1)$ °C.   |  |   |
| <b>6.3</b>     | <b>Physical requirements</b>   |  |   |
| <b>6.3.1</b>   | <b>Resistance to cold</b>  |  |   |
| <b>6.3.1.1</b> | <b>Requirements</b>  |  |   |
|                | After an exposure for 4 h and the following treatment, there shall be no signs of cracking when the test sample is examined under a magnification of $\times 10$ .   |  | P |
| <b>6.3.1.2</b> | <b>Test method</b>   |  |   |
|                | In accordance with ISO 4675, a sample with a size of $(100 \cdot 250)$ mm shall be kept in a suitable cooling chamber at a temperature of $-5$ °C. Then the sample shall be folded through $180^\circ$ and kept under a weight of 5 kg for another 10 min in the cooling chamber. After removal the sample is examined for fractures or cracking.  |  | P |
| <b>6.3.2</b>   | <b>Resistance to heat</b>  |  |   |
| <b>6.3.2.1</b> | <b>Requirements</b>  |  |   |
|                | The test sample shall give neither evidence of blocking nor show damages of the surface after unfolding when the sample is examined under a magnification of 5 x.  |  | P |
| <b>6.3.2.2</b> | <b>Test method</b>   |  |   |
|                | A test piece with a size of $(100 \cdot 250)$ mm shall be folded at its centre line, with the external sides laid together, and stored for 2 h in a heating chamber at a temperature of $(60 \pm 2)$ °C under a load of 50 N/50 cm <sup>2</sup> . After removal from the heating chamber the sample is allowed to cool down for 2h under standard atmosphere, then unfolded and examined for blocking or surface damages.  |  | P |
| <b>6.4</b>     | <b>Mechanical requirements of unsupported hull materials</b>   |  |   |
| <b>6.4.1</b>   | <b>General</b>   |  |   |
|                | Unless otherwise specified, the standard environmental conditions for the tests shall be a temperature of $(20 \pm 2)$ °C and a relative humidity of $(65 \pm 5)$ %.   |  | P |
| <b>6.4.2</b>   | <b>Resistance to puncturing</b>  |  |   |
| <b>6.4.2.1</b> | <b>Requirements</b>  |  |   |
|                | Air filled buoyancy chambers shall remain air tight when tested according to the procedure given in 6.4.2.2.   |  | P |
| <b>6.4.2.2</b> | <b>Test method</b>   |  |   |
|                | Apply a force of 5 N to any part of the external surface of the device when inflated to the designed working pressure or until full shape and functionality is achieved if no working pressure is given through a steel needle tip with a radius of 0,5 mm. Apply the force gradually over a period of 5 s. Maintain the force for further 5 s. Upon completion of the procedure, submerge the device or the tested part of it in a bath of cold water and examine for leakage of air. |  | P |
| <b>6.5</b>     | <b>Mechanical requirements for reinforced hull materials</b>   |  |   |
| <b>6.5.1</b>   | <b>General</b>   |  |   |

|                |  |  |   |
|----------------|--|--|---|
|                | Specific requirements according to ISO 25649-3 to ISO 25649-7 apply.   |  | P |
| <b>6.5.2</b>   | <b>Adhesion of coatings (if applicable)</b>  |  |   |
| <b>6.5.2.1</b> | <b>Requirements</b>  |  |   |
|                | Where the hull of a floating leisure article consists of coated reinforcing materials (e.g. cloths), the adhesion between the coating and the substrate (base cloth) shall be sufficiently strong, so as to exclude any unintentional separation of the coating from the substrate during the intended use of the floating leisure article. The separating force between the coating and the reinforcing material shall be at least 20 N/cm <sup>2</sup> .   |  | P |
| <b>6.5.2.2</b> | <b>Test method</b>   |  |   |
|                | Carry out the test according to EN ISO 2411.   |  | P |
| <b>6.6</b>     | <b>Other materials</b>   |  |   |
| <b>6.6.1</b>   | <b>Wood</b>  |  |   |
| <b>6.6.1.1</b> | <b>Requirements</b>  |  |   |
|                | The exposed types of timber and plywood used shall be suitable for the application and the marine environment and shall be given weatherproof protection, such as paint, varnish or preservative, when exposed to the marine environment. All plywood used shall incorporate hardwoods for both internal and external veneers and the bonding adhesive shall be waterproof and boil-proof. The timber used shall be seasoned and free from sapwood, decay, insect attack, splits and other imperfections likely to adversely affect the performance of the material. The timber shall be generally free from knots but an occasional sound intergrown knot is acceptable. Adjoining edges and/or surfaces, including any end-grain, shall be effectively sealed. The legal regulations of the country or region of application shall be met. For the European region the selection of preservatives, relevant regulations shall be considered. Restrictions on the marketing and use of certain dangerous substances and preparations are addressed in the European Directive 76/769/EEC and its amendments, e.g. the restriction of organostannic compounds for crafts. |  | N |
| <b>6.6.1.2</b> | <b>Test method</b>   |  |   |
|                | Verification through visual examination by test panel.   |  | N |
| <b>6.6.2</b>   | <b>Metal and synthetic material parts</b>  |  |   |
| <b>6.6.2.1</b> | <b>Requirements</b>  |  |   |
|                | Materials used shall be of a type, strength and finish, suitable for the intended purpose of the components and compatible with the marine environment.  |  | N |
| <b>6.6.2.2</b> | <b>Testing</b>   |  |   |
|                | Visual inspection and/or manufacturer's certificate on request.  |  | N |
| <b>6.7</b>     | <b>Threads</b>   |  |   |
| <b>6.7.1</b>   | <b>Requirements</b>  |  |   |
|                | To sew load bearing components, only threads manufactured from synthetic materials whose   |  | P |

|              |   |  |   |
|--------------|---|--|---|
|              | properties correspond to polyester or polyamide fibres shall be used. |  |   |
| <b>6.7.2</b> | <b>Test method</b>  |  |   |
|              | Visual inspection and/or manufacturer's certificate on request.       |  | P |

Abbreviation: P = Pass; N = Not Applicable

Note: all test results are only valid for the samples being tested.

**Table 1 —Classification and criteria to distinguish floating leisure articles from aquatic toys**

| Class          | Description/Structural design criteria  | Not an aquatic toy because:  |
|----------------|---|--|
| A <sup>b</sup> | <p>Floating leisure articles intended for quasi-static Positional use on the water and position of user upon the buoyant structure. Single and collective use, mainly passive. Normally no mechanical means of propulsion, but possible.</p> <p>Devices maybe of design that provides floating stability others do not and have to be balanced by the user.</p> <ul style="list-style-type: none"> <li>— minimum length overall(uninflated, flat) = 1,2m</li> <li>— minimum age above 36 months.</li> </ul>   | <ul style="list-style-type: none"> <li>— largest uninflated dimension<sup>a</sup> exceeds 1,2m when uninflated, due to size product is a risk to be blown into open waters and/or provokes use in deep water, and/or</li> <li>— labelling includes adult use; and/or</li> <li>— product is labelled not to be a toy; and/or</li> <li>— use of product depends on deepwater or use in deepwater is foreseeable; and/or</li> <li>— product includes a body opening inside a circumferential buoyancy system around the user's body and thus a serious entrapment risk.</li> </ul>  |
| B <sup>b</sup> | <p>Floating leisure articles intended for quasistatic use but position of user inside a buoyant structure around the user's body (relatively tight fit). Buoyant structure fully enclosing or with openings. Devices may provide a body holding system or user is expected to hold himself by the upper arms and hands. Body holding system might be an integrated seat, straps or other means of holding regardless of the body posture (sitting, standing, laying, kneeling etc.). User's body is more or less immersed. Normally the upper part (chest upwards) is out of the water. Single or collective / passive or active use. Normally no mechanical means of propulsion but possible. B2 minimum length: over all (uninflated, flat) = 1,2m.</p> <ul style="list-style-type: none"> <li>— B1: use out of user's standing depth.</li> <li>— minimum age / body weight variable but above 36 months / 18kg.</li> </ul> | <ul style="list-style-type: none"> <li>— largest uninflated dimension<sup>a</sup> exceeds 1, 2m; and / or</li> <li>— product includes a body opening inside a circumferential buoyancy system around the user's body and thus a serious entrapment risk; and / or</li> <li>— product needs for appropriate use a water depth beyond user's standing depth; and/or</li> <li>— product is labelled not to be a toy, and/or</li> <li>— intended use includes adults (label), and/or</li> <li>— use of product depends on deep water on use in deep water is foreseeable.</li> </ul> |

|  |  |  |
|--|--|--|
| <p>C<sup>b</sup></p>   | <p>Floating leisure articles for dynamic use, i.e. application at high speed. Position of user is upon or inside the buoyant structure. There may be a cockpit or seat or other means to give hold to the user. The device is towed behind external means of propulsion. Towing rope fixed to device or held by user. User is required to manage floating stability and safe course behind the towing devices.</p> <ul style="list-style-type: none"> <li>— C1: static use towable, static user.</li> <li>— C2: active sport use towable, active user, sport application.</li> <li>— C3: active extreme use towable, active user, extreme application.</li> <li>— use beyond user's standing depth</li> <li>— minimum age variable but above 6 years.</li> </ul> | <ul style="list-style-type: none"> <li>— largest uninflated dimension<sup>a</sup> exceeds 1.2m when uninflated; and/or</li> <li>— product is towed by non-manual means and/or</li> <li>— product use exceeds a speed limit of 3km/h;</li> <li>— intended use includes adult users (via labelling); and/or</li> <li>— product is labelled not to be a toy, and/or</li> <li>— use of product depends on deepwater, or use in deepwater is foreseeable.</li> </ul>                                      |
| <p>D<sup>b</sup></p>   | <p>Floating leisure articles for passive (resting, relaxing on flat surface) but mainly active use i.e. climbing, jumping (more than 1m), swinging, rotating and any related activity. No distinct position of user. Single or collective use. No mechanical means of propulsion. Shall be anchored.</p> <ul style="list-style-type: none"> <li>— minimum length overall (uninflated, flat) = 1.2m</li> <li>— minimum age variable but above 36 months</li> </ul>  | <ul style="list-style-type: none"> <li>— largest uninflated dimension<sup>a</sup> exceeds 1.2m; and/or</li> <li>— product includes usability for jumping and climbing on or to a height of more than 1.0m, and/or</li> <li>— labelling does not include the warning note according to EN71 concerning supervision and use in shallow water only, and/or</li> <li>— labelling includes adult use; and/or</li> <li>— use of product depends on deepwater or use in deepwater is foreseeable</li> </ul> |
| <p>E<sup>b</sup></p>   | <p>Inflatable boats with buoyancy less than 1800N and an overall length of more than 1.2m. Single and collective use. Position of user inside the buoyant structure (wide cockpit). Propulsion: manually, motor, sail.</p> <ul style="list-style-type: none"> <li>— minimum length overall (uninflated, flat) = 1.2m</li> <li>— minimum age variable but above 36 months.</li> </ul>   | <ul style="list-style-type: none"> <li>— largest uninflated dimension<sup>a</sup> exceeds 1.2m; and/or</li> <li>— product is equipped or intended for mechanical means of propulsion; and/or</li> <li>— labelling does not include the warning note according to EN71 concerning supervision and use in shallow water only, and/or</li> <li>— labelling includes adult use; and/or</li> <li>— use of product depends on deep water or use in deep water is foreseeable</li> </ul>                    |
| <p><sup>a</sup> Except long thin protrusions as e.g. the neck of a swan shaped inflatable.</p> <p><sup>b</sup> For typical products, see risk analysis</p> |  |  |

Test probe (see Figure 1), 3 years 5. percentile (smallest foot dimension).

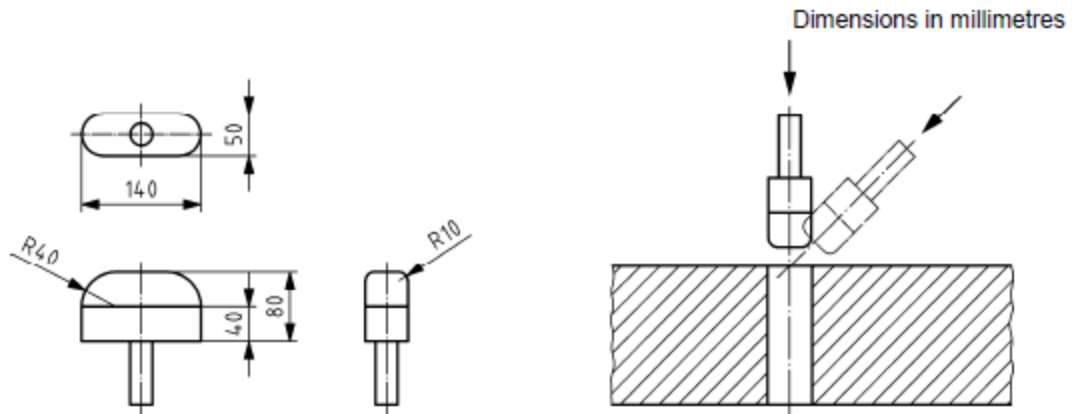
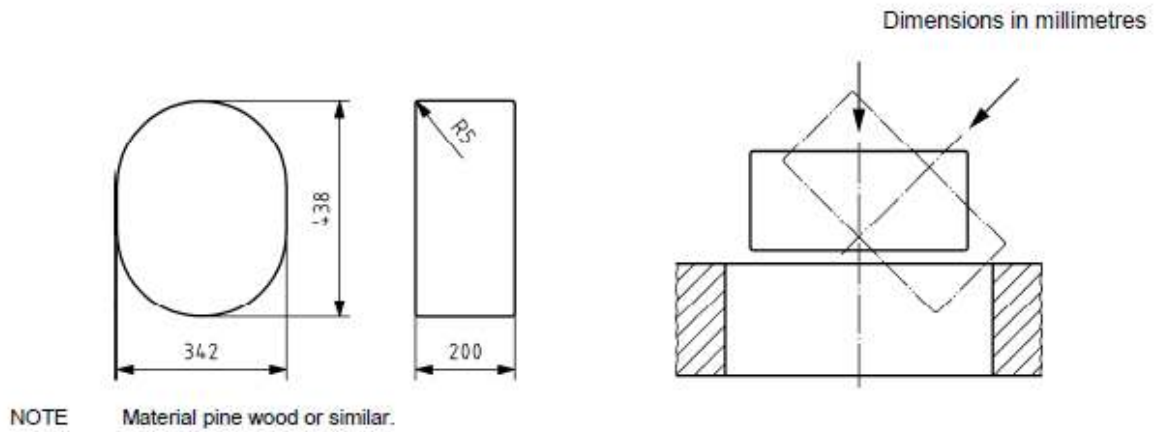


Figure 1 — Foot probe



NOTE Material pine wood or similar.

Figure 2 — Adult torso probe

Test probe, 3 years 5 percentile (smallest head dimension, see also EN 14960).

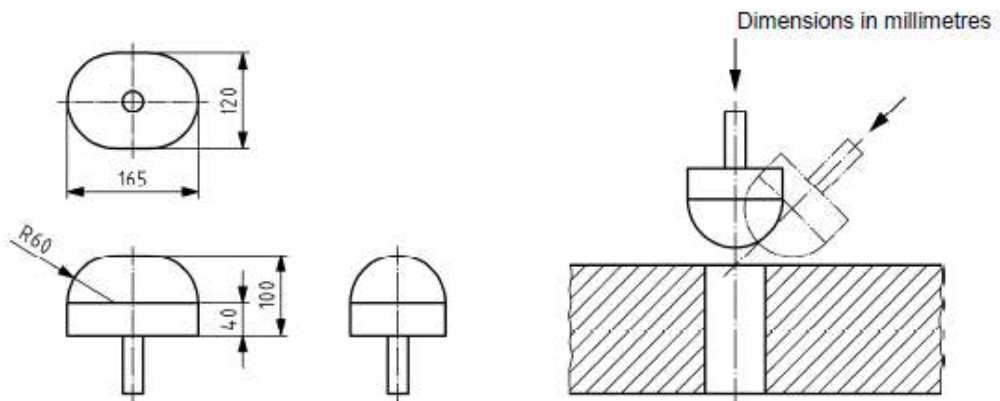
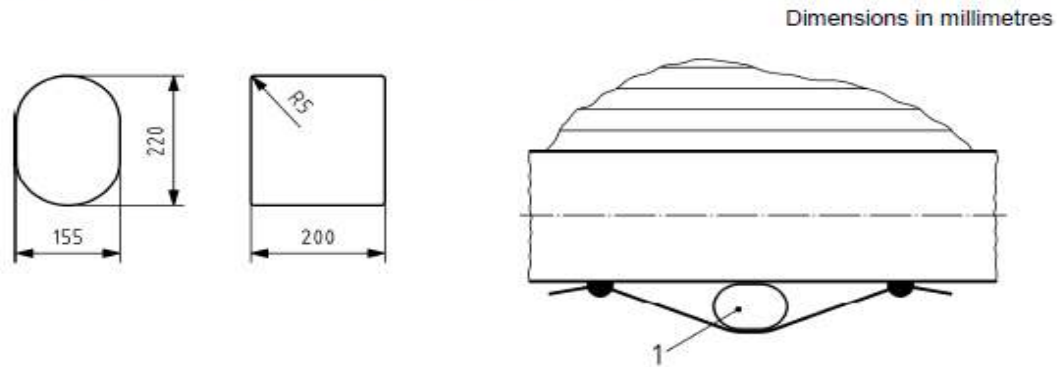


Figure 3 — Head probe

Test probe, 3 years 95 percentile (biggest torso dimension, material: pine wood or similar).



**Key**

- 1 Child's torso probe

Figure 4 — Child torso probe

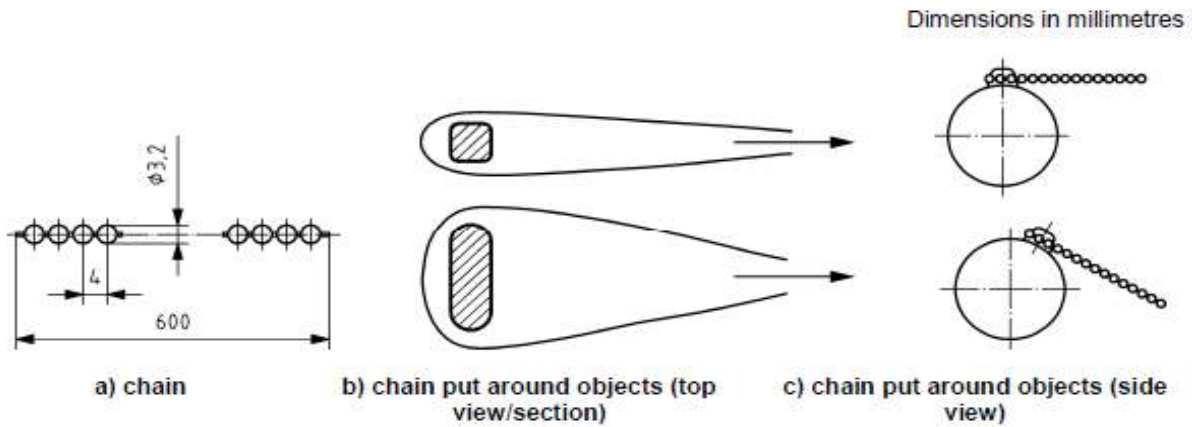


Figure 5 — Ball chain

Table 2 — Test panel

| Test subjects          | Sex    | Age years | Body weight kg | Body size cm | Number of subjects                      | Mix <sup>b</sup> | Child/adult equivalence |
|------------------------|--------|-----------|----------------|--------------|---|------------------|-------------------------|
| Subject 1              | Male   | > 18      | ≥ 90           | ≥ 180        | according to manufacturers instructions | 1 times          | 2 children=1 adult      |
| Subject 2              | Male   | > 18      | 70-80          | ≥ 170        |   | 50/50            |                         |
| Subject 3              | Female | > 18      | 65-70          | ≥ 160        |   | 50/50            |                         |
| Subject 4 <sup>a</sup> | Female | > 18      | 40-45          | < 150        |   | —                |                         |

<sup>a</sup> Test subject 4 represents a child. In order to avoid involvement of children in testing, the child subject is substituted by the statistically smallest adult women(5.percentile).

<sup>b</sup> If a device is classified for an unequal number of adult users,subject 1 shall constitute the majority.

Test subjects shall be able-bodied and good swimmers. They shall be made familiar with the particularities of the product and the particularities of the inwater test procedures.



| <b>EN25649-2 Part 2: Floating leisure articles for use on and in the water - Consumer information</b> |  |  |   |
|---|--|--|---|
| 4   | Consumer information   |  | P |
| 4.1   | General  |  | P |
|   | This information shall serve the purpose of:<br>- information before buying (point of sale information);<br>- information for preparing the product for use;<br>- information relating to the use of the product;<br>- information concerning maintenance, storage and repair.   |  | P |
| 4.2   | Consumer information at point of sale<br>(information before buying)   |  | P |
| 4.2.1   | General  |  | P |
|   | Information at point of sale shall be given on the packaging or in a way that it can be noticed by the consumer, e.g. through a transparent cover. It shall include all data relevant for matching consumer needs with the performance characteristics of the product, in particular those related to the rough shape (appearance) and dimensions of the product, user specifications (age groups, body weight, etc. if applicable), load capacity, place of use, performance and relevant safety information. As means of conveying this information in a unified and comprehensible way, the safety information symbol and safety sign as specified in Clause 6 shall be applied. When necessary, safety information symbol and safety sign shall be supplemented by plain text. The order of safety information symbols shall follow a coherent approach following the logic of buying and use. The safety information symbols and the safety sign shall be grouped together as specified in 6.2. |  | P |
| 4.2.2   | General information to be provided   |  | P |
|   | - Name and address of supplier;<br>- Type of device, designation;<br>- Picture or diagram showing the rough shape of the inflatable and its main dimensions;<br>- Number of this document  |  | P |
| 4.3   | Information related to preparation for use   |  | P |
|   | Information for installation and preparing for use shall be given in the instructions for use. In cases of simple design and use, it may be printed on the product.  |  | P |

|       |  |                   |   |
|-------|--|-------------------|---|
| 4.4   | Information related to maintenance, repair and storage   |                   | P |
|       | Information on maintenance, repair and storage shall be given in the instructions for use.   |                   | P |
| 5     | Requirements related to printing   |                   | P |
| 5.1   | General  |                   | P |
|       | Printing containing information shall be in contrast to its background. Supplementary safety information symbols and general safety signs shall be printed as shown in Clause 6.   |                   | P |
| 5.2   | Durability of printings on the product   |                   | P |
|       | Printings of all information on the product shall comply with the durability requirements given in ISO 25649-1:2017, Clause 7.   |                   | P |
| 5.3   | Language and letter size for plain text information on the product   | English           | P |
| 5.3.1 | Requirements   |                   | P |
|       | Markings shall be printed or embossed in upper case, letter size not less than 5 mm in height for the word "WARNING" and not less than 3 mm in height lower case for the remaining text. Colour may vary but shall always be in contrast or relief to the background and be legible. Plain text information shall be given in the language of the country of sale. |                   | P |
| 5.3.2 | Testing  |                   | P |
|       | Verification by inspection.  |                   | P |
| 6     | Product safety label   |                   | P |
| 6.1   | General .  |                   | P |
|       | Safety information symbols and general safety signs on the product or in the accompanying information material shall be in accordance with the layout as presented in Figure 1 to Figure 37.   |                   | P |
| 6.2   | Safety information symbol  | See product label | P |
| 6.2.1 | Safety information symbols related to warnings   |                   | P |
|       | The safety information symbols below (allocation of the safety information symbol, see 6.7) shall be headed by the warning action sign in Figure 35.   |                   | P |
| 6.2.2 | Safety information symbols related to prohibition  |                   | P |
|       | The safety information symbols below (allocation of the safety information symbol see 6.7) shall be headed by the prohibition sign in Figure 37:   |                   | P |

|       |   |                                    |   |
|-------|---|------------------------------------|---|
| 6.2.3 | Safety information symbols related to mandatory instruction   |                                    | P |
|       | The safety information symbols below (for allocation of the safety information symbol see 6.7) shall be headed by mandatory action sign in Figure 36.   |                                    | P |
| 6.3   | Safety sign   |                                    | P |
| 6.4   | Position of safety information symbol and safety sign   |                                    | P |
|       | Supplementary safety information symbols expressing warnings shall be arrayed in a separate group and shall be visible during use of the product. Graphical symbols or other means of consumer information are deemed visible during use if they are positioned on the top or sides of the product that are above the water surface during use and can therefore be seen when the product is placed in/on the water for intended use. This includes visibility during setup and/or boarding of the product. For those floating leisure articles providing more than one position of use (e.g. air mattresses), the graphical symbols or other means of consumer information shall be placed on the intended upper side of use. This group of supplementary safety information symbol and safety sign should be arranged as shown in Annex A. The supplementary safety information symbol shall be placed below or beside the safety sign. Examples are given in Figure A.1, Figure A.2 and Figure A.3. Figure 1 and Figure 20 shall be placed separately on the product.<br>An example is given in Figure A.4 and Figure A.5. |                                    | P |
| 6.5   | Colour of safety information symbols and safety sign.   |                                    | P |
|       | Colour of safety signs (see 6.3) shall be in accordance with ISO 3864-2. The safety information symbols shall be in black and white. Safety information symbols and safety sign for foam products may be embossed.  |                                    | P |
| 6.6   | Size of safety information symbol and safety sign   |                                    | P |
|       | The size of safety information symbols and safety signs on the product shall be at least 30 mm × 30 mm minimum (for safety information symbol see Figure 38).   | greater than 30 mm × 30 mm minimum | P |
| 6.7   | Allocation of the safety information symbols  |                                    | P |
|       | The safety sign (see Figures 35, 36 and 37) categorize the supplementary safety information symbols in “warnings  |                                    | P |

|  |  |  |  |
|--|--|--|--|
|  | <p>symbols” “mandatory instruction symbols” and “prohibition symbols”.The general safety signs in Figures 35, 36 and 37 shall always be used in combination with following relevant supplementary safety information symbol (see Table 1 to 12).NOTE Examples are given in Annex A.The messages specified in Table 1 to 12 represent the mandated safety information with which a floating leisure article and/or the packaging shall be labelled. Additional safety information shall be given if needed.It shall be visible and legible on the packaging and/or product.Tables 1 and 2 are applicable to all classes/sub classes/products.</p> |  |  |
|--|--|--|--|

**Table 2 — Supplementary safety information symbols on the product applicable to all classes/sub classes/products**

| Figure                                   | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19             | 20             |
|--|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----------------|----------------|
| All classes/<br>sub classes/<br>products | ✓  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | ✓  | -  | ✓ <sup>b</sup> | ✓ <sup>a</sup> |
| Figure                                   | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | -  | -              | -              |
| All classes/<br>sub classes/<br>products | ✓  | -  | -  | ✓  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | ✓  | ✓  | ✓  | -  | -              | -              |

<sup>a</sup> With the exception of: ISO 25649-4, sub class B1, swim seats.  
<sup>b</sup> With the exception of certain products per manufacturer's decision and inherent buoyant materials.

**Table 3 — Additional supplementary safety information symbols on the packaging applicable to Class A products**

| Figure   | 1  | 2              | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11             | 12               | 13 | 14             | 15 | 16 | 17 | 18 | 19 | 20 |
|----------|----|----------------|----|----|----|----|----|----|----|----|----------------|------------------|----|----------------|----|----|----|----|----|----|
| Class A1 | -  | ✓ <sup>a</sup> | -  | -  | -  | -  | -  | -  | -  | -  | -              | -                | ✓  | ✓              | -  | -  | -  | -  | -  | -  |
| Class A2 | -  | ✓ <sup>a</sup> | -  | -  | -  | -  | -  | -  | -  | -  | -              | -                | ✓  | ✓              | -  | -  | -  | -  | -  | -  |
| Figure   | 21 | 22             | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31             | 32               | 33 | 34             | 35 | 36 | 37 | -  | -  | -  |
| Class A1 | -  | -              | -  | -  | -  | -  | -  | ✓  | -  | -  | ✓ <sup>b</sup> | ✓ <sup>b,c</sup> | ✓  | ✓ <sup>a</sup> | -  | -  | -  | -  | -  | -  |
| Class A2 | -  | -              | -  | -  | -  | -  | -  | ✓  | -  | -  | ✓ <sup>b</sup> | ✓ <sup>b,c</sup> | ✓  | ✓ <sup>a</sup> | -  | -  | -  | -  | -  | -  |

If symbol 32 is used, symbols 13, 14 and 31 should not be used on the same product, conversely if symbols 13, 14 and 31 are used symbol 32 should not be used on that product.  
<sup>a</sup> For rings only.  
<sup>b</sup> Either supplementary safety information symbol 31 or 32.  
<sup>c</sup> According to manufacturer's decision.

| <b>EN25649-3 Part 3: Floating leisure articles for use on and in the water - Additional specific safety requirements and test methods for Class A devices</b> |  |  |   |
|---|--|--|---|
| 4   | Safety requirements and test methods   |  | P |
| 4.1   | General  |  | P |
|   | <p>Construction of a floating leisure article shall be such that it corresponds in terms of design, dimensions, safety, strength and durability for its intended use. The requirements set out in this standard were chosen to ensure compliance with these considerations. If inflatable floating leisure articles shall provide buoyancy in several components then requirements apply to all components. Floating leisure articles shall provide residual buoyancy if one air chamber fails. This residual buoyancy shall maintain the safety of the device even if its function is lost. The following safety requirements are therefore related to:</p> <ul style="list-style-type: none"> <li>- design;</li> <li>- sizing;</li> <li>- materials;</li> <li>- strength;</li> <li>- performance;</li> <li>- information.</li> </ul> <p>In individual cases, due to the unpredictability, valency and indeterminability of existing and future concrete products, a corresponding choice shall be made. Design and appearance of floating leisure articles shall not change the intended primary function of these floating leisure articles nor introduce a toy play value.</p> |  | P |
| 4.2   | Design, sizing, admissible number of users and maximum load capacity   |  | P |
| 4.2.1   | General  |  | P |
|   | Devices shall be marked according to their size and / or number of permitted users and maximum load capacity.  |  | P |
| 4.2.2   | Sizing   |  | P |
| 4.2.2.1   | Requirements   |  | P |
|   | If a specific size/body weight correlation between user and device is relevant, the marking shall be in accordance with the range of body weights. The size/body weights of the user shall be indicated on the   |  | P |

|         |   |  |   |
|---------|---|--|---|
|         | product by completing the relevant boxes of the appropriate safety information symbol “User’s body weight range” as specified in ISO 25649-2.   |  |   |
| 4.2.2.2 | Test method   |  | P |
|         | Check for correct marking and completion.   |  | P |
| 4.2.3   | A1-products, space per person and admissible number of users  |  | P |
| 4.2.3.1 | Requirements  |  | P |
|         | <p>A1-products shall be labelled with regard to the intended posture — lying/sitting — of the user(s) and the maximum permissible number of users. The minimum space for a user in lying posture shall correspond to a flexible template (adult/child) the dimensions of which are specified in ISO 25649-1:2017, A.1.1. The minimum space for a sitting user shall correspond to the template (adult/child) as specified in ISO 25649-1:2017, A.1.2. In cases of combined use (sitting and lying), the template for a lying person shall be applied to determine the available area.</p> <p>Templates may exceed the outer circumference of the device to a total amount of 30 %. This amount is divided in 15 % of template length for the head area and 15 % of template length for the leg area (see shaded area of templates in ISO 25649-1:2017, Annex A). The angle between centre line of the template and tangential of a possible back rest, board wall, etc. shall be greater than 60° (see Figure 1). The total amount of users determined by the templates shall not contradict to the load capacity and floating stability of the device.</p> <p>Space requirement using templates is not applicable for ride-on devices where distinct upright seats and/or seating positions are imposed by the device.</p> |  | P |
| 4.2.3.2 | Test method   |  | P |
|         | <p>Testing shall be done by applying the relevant templates as specified in ISO 25649-1:2017, A.1 and shown in Figure 1. Templates shall be stretched out over the area available to the user without overlapping.</p> <p>Templates may be arranged to optimize the amount of users and the mix of adults and children without</p>  |  | P |

|         |  |  |   |
|---------|--|--|---|
|         | contradicting to the load capacity of the device. Blank areas of templates shall be completely inside the outer circumference. Check by visual inspection for appropriate labelling in accordance with safety information symbols “Number of users, adult/children” and/or “Maximum load capacity” as specified in ISO 25649-2.  |  |   |
| 4.2.4   | A2-products, space per person and admissible number of users   |  | P |
| 4.2.4.1 | Requirements   |  | P |
|         | <p>A-2 products shall provide distinct seat(s) or sitting areas or recognisable space where the user is to be positioned in the intended posture. Seats, etc. of ride-on devices shall be equipped with at least one grab handle for each permissible user. If the device implies sitting in line of more than one user, the sitting space for each user shall be at least a length of:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Child = 30 cm if the legs hang down;</li> <li><input type="checkbox"/> Child = 60 cm if the thighs follow the seat surface.</li> <li><input type="checkbox"/> Adult = 35 cm if the legs hang down;</li> <li><input type="checkbox"/> Adult = 70 cm if the thighs follow the seat surface.</li> </ul> |  | P |
| 4.2.4.2 | Test method  |  | P |
|         | Visual inspection and measurement.   |  | P |
| 4.3     | In water performance   |  | P |
| 4.3.1   | Amount of buoyancy and stable floating position  |  | P |
| 4.3.1.1 | Requirements   |  | P |
|         | <p>All devices (A1, A2) shall provide sufficient buoyancy and adequate buoyancy distribution to bear the weight of the intended number of users. Floating devices shall float stable with all test subjects placed on the intended position and posture on the device. The design supporting area shall not be flooded, not applicable if the product is designed to provide a supporting area which is intentionally under water. Floating leisure articles claiming to provide floating stability (A1) shall additionally meet the test as specified in 4.3.2.2.2. When loaded with the maximum/minimum number of passengers, the device shall maintain the stable floating position as defined in ISO 25649-1:2017, 3.13. The</p>                             |  | P |



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|           | capability of stable floating performance or the need for balancing shall be marked on the packaging via the relevant pair-safety information symbol “Device provides floating stability” and “Device requires balancing” as specified in ISO 25649-2.   |  |   |
| 4.3.1.2   | Test method  |  | P |
|           | The maximum number of test subjects according to manufacturer's declaration (adults, children) shall be placed within the available area with no part of the body outside the product in a way as shown in Figure 2. If a device is classified for more than one user, the array of all test subjects shall be done by applying the determined postures and positions in a way most likely to cause failure.   |  | P |
| 4.3.2     | Residual buoyancy of devices claiming floating stability (CASES A, B)  |  | N |
| 4.3.2.1   | General  |  | N |
|           | Where buoyancy is not provided by inherently buoyant material, the device shall have a minimum of two separate air chambers distributing the buoyancy so that the requirements in 4.3.2.2 are met.   |  | N |
| 4.3.2.2   | CASE A, residual buoyancy and stable floating after failure of one air chamber   |  | N |
| 4.3.2.2.1 | Requirements   |  | N |
|           | A1-devices without distinct circumferential air chambers (walls) higher than the available area, CASE B-designs:<br>a) shall at least provide a residual buoyancy which is sufficient to keep all permissible users somehow afloat on the device regardless of their posture on or in the water when holding onto the device;<br>NOTE Persons are considered to be still on the device even if parts of the available area onto which they can remain is partly flooded, respectively the device takes a crucial floating angle so that these persons get partly into the water.<br>b) the achievable floating position shall enable the users to keep their airways above water level |  | N |

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|           | <p>without exercising swimming strokes or any other active movements to keep them afloat except holding to the device;</p> <p>c) there shall be means on the device to grab on for each permissible user;</p> <p>d) these means shall be available and reachable for each permissible user after immersion.</p> <p>If the device is made up by several independent components these requirements apply for each of them.</p> <p>Testing shall be done in accordance with 4.3.2.3.2.</p> <p>Verification by assessment panel.</p>   |  |   |
| 4.3.2.2.2 | Test method  |  | N |
|           | <p>Load the device with the maximum number of users within the available area. Select test persons in accordance with ISO 25649-1:2017, 5.5. Apply posture 4 as specified in ISO 25649-1:2017, 5.5.5 or the variation of it [see Figure 2 a) to h) in 4.3.1.2] which corresponds most appropriately to the product design and intended function. If there are no distinct sitting positions, test subjects shall be positioned within the available area according to 4.3.1.2 and in a way most likely to cause failure (uneven load distribution inside the available area). Deflate the air chamber most likely to cause failure by sudden deflation. Check whether the requirements are met after test subjects have fallen into the water and taken action according to 4.3.2.3.1 a) to d).Verification by assessment panel.</p> |  | N |
| 4.3.2.3.  | CASE B, residual buoyancy and distinct means to hold on after failure of one air chamber   |  | N |
| 4.3.2.3.1 | Requirements   |  | N |
|           | <p>A1-devices without distinct circumferential air chambers (walls) higher than the available area, CASE B-designs:</p> <p>a) shall at least provide a residual buoyancy which is sufficient to keep all permissible users somehow afloat on the device regardless of their posture on or in the water when holding onto the device;</p> <p>NOTE Persons are considered to be still on the device even if parts of the available area onto which they</p>  |  | N |

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|           | <p>can remain is partly flooded, respectively the device takes a crucial floating angle so that these persons get partly into the water.</p> <p>b) the achievable floating position shall enable the users to keep their airways above water level without exercising swimming strokes or any other active movements to keep them afloat except holding to the device;</p> <p>c) there shall be means on the device to grab on for each permissible user;</p> <p>d) these means shall be available and reachable for each permissible user after immersion.</p> <p>If the device is made up by several independent components these requirements apply for each of them.</p> <p>Testing shall be done in accordance with 4.3.2.3.2. Verification by assessment panel.</p>   |  |   |
| 4.3.2.3.2 | Test method   |  | N |
|           | <p>Load the device with the maximum number of users within the available area. Select test persons in accordance with manufacturer's declaration regarding permissible users and in accordance with ISO 25649-1:2017, 5.5. Apply posture 4 as specified in ISO 25649-1:2017, 5.5.5 or the variation of it [see Figure 2 a) to h) in 4.3.1.2] which corresponds most appropriately to the product design and intended function. If there are no distinct sitting positions, test subjects shall be positioned within the available area according to 4.3.1.2 and in a way most likely to cause failure (uneven load distribution inside the available area). Deflate the air chamber most likely to cause failure by sudden deflation. Check whether the requirements are met after test subjects have fallen into the water and taken action according to 4.3.2.3.1 a) to d). Verification by assessment panel.</p> |  | N |
| 4.3.3     | Residual buoyancy of floating leisure articles not claiming floating stability (CASES C, D)   |  | N |
| 4.3.3.1   | CASE C, residual buoyancy   |  | N |
| 4.3.3.1.1 | Requirements  |  | N |
|           | A2-products of floating articles for single and collective  |  |   |

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|           | <p>use, CASE C-designs:</p> <p>a) shall at least provide a residual buoyancy which is sufficient to keep all permissible users afloat when holding onto it;</p> <p>b) the achievable floating position shall enable the users to keep their airways above water without exercising swimming strokes or any other active movements to keep them afloat except holding to the device;</p> <p>c) there shall be means on the device to grab on for each permissible user;</p> <p>d) these means shall be available and reachable for each permissible user after immersion.</p> <p>If the device is made up by several independent components, this requirement applies for each of them.</p> <p>Testing shall be done in accordance with 4.3.3.1.2.</p> <p>Verification by assessment panel.</p>   |  | N |
| 4.3.3.1.2 | Test method  |  | N |
|           | <p>Load the device according to the maximum number of users within the available area. Select test persons in accordance with manufacturer's declaration regarding permissible users and in accordance with ISO 25649-1:2017, 5.5. Apply posture 4 or the variation of it (4a to 4e in 4.3.1.2) which corresponds most appropriately to the product design and intended function. If there are no distinct seats, position test subjects within the available area according to 4.3.1.2 and in a way most likely to cause failure through uneven load distribution inside the available area. Deflate the air chamber most likely to cause failure by sudden deflation. Check whether the requirements are met after test subjects have fallen into the water and taken action according to 4.3.3.1.1 a) to d).</p> <p>Verification by assessment panel.</p> |  | N |
| 4.3.3.2   | CASE D, residual buoyancy  |  | N |
| 4.3.3.2.1 | Requirements   |  | N |
|           | <p>A2-products of floating articles for single use only, CASE D designs:</p> <p>a) shall at least provide a residual buoyancy which is</p>   |  | N |

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|           | <p>sufficient to keep the user when holding on to it after immersion;</p> <p>b) it shall be shown that the user is able to grab at least the entire remaining buoyant structure or parts of it in a way enabling him to stay safely afloat with the airways above water level without exercising swimming strokes or any other active movements to keep them afloat except holding onto the device. If the device is made up by several independent components, this requirement applies for each of them.</p> <p>Testing shall be done in accordance with 4.3.3.2.2.</p> <p>Verification by assessment panel.</p>  |  |   |
| 4.3.3.2.2 | Test method   |  | N |
|           | <p>Load the device with the maximum number of users within the available area. Select test persons in accordance with manufacturer's declaration regarding permissible users and in accordance with ISO 25649-1:2017, 5.5. Apply posture 4 or the variation of it (4a) to e) in 4.3.1.2) which corresponds most appropriately to the product design and intended function. If there are no distinct seats, position test subjects within the available area according to 4.3.1.2 of the present standard and in a way most likely to cause failure through uneven load distribution inside the available area. Deflate the air chamber most likely to cause failure by sudden deflation. Check whether the requirements are met after test subject has fallen into the water and taken action according to 4.3.3.2.1 a) to b).</p> <p>Verification by assessment panel.</p> |  | N |
| 4.3.4     | Capsizing and escape  |  | P |
| 4.3.4.1   | Escape from the device (body entrapment, leg/foot entanglement)   |  | P |
|           | <p>In case normal foreseeable use and during the incident of a sudden capsizing none of the users shall become entrapped, entangled or otherwise hindered from complete separation off the device. For this purpose, the standard is focussing on the following known major entrapment risks:</p>   |  | P |

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|         | <ul style="list-style-type: none"> <li>- foot/leg entrapment;</li> <li>- head/neck entrapment;</li> <li>- torso entrapment;</li> <li>- entanglement due to protruding parts.</li> </ul> <p>There shall be no entrapment/entanglement of the test devices/test probes if they are applied on the product in its normal working position.</p>   |     |   |
| 4.4.4.2 | Test method for foot/leg entrapment   | 5.2 | P |
| 4.3.4.3 | Test method for torso entrapment  | 5.3 | P |
| 4.3.4.4 | Test method for protruding parts  | 5.4 | P |
| 4.3.4.5 | 4.3.5 Grab handles and safety lines (not applicable to air mattresses)  |     | P |
| 4.3.5   | Grab handles and safety lines (not applicable to air mattresses)  |     | N |
| 4.3.5.1 | Requirements  |     | N |
|         | <p>Floating leisure articles of CASES A, B and C in 4.3.2.2; 4.3.2.3 and 4.3.3.1 shall be fitted with means of holding (grab handles, safety lines, etc.) for each permissible user which are reachable from an on-board position and/or also for persons in the water. Safety lines shall be arranged in a way that they can be grabbed from an in-water position and shall not cause entrapment (see 4.3.2.2). The means of holding shall be provided regardless of the floating stability of the device and shall be reachable also in capsized condition of the device. Testing in accordance with 4.3.5.2.</p> |     | N |
| 4.3.5.2 | Test method   |     | N |
|         | <p>Visual check during one of the in water tests above. Assessment by assessment panel.</p>   |     | N |
| 4.3.6   | Re-embarkation from the water in normal use and failure of one air chamber in CASE A1   |     | N |
| 4.3.6.1 | Requirements  |     | N |
|         | <p>Floating devices shall be so designed that a normal user (test subject) is able to re-embark on the device. Testing shall be done in accordance with 4.3.6.2.</p>  |     | N |
| 4.3.6.2 | Test method   |     | N |
|         | <p>All test subjects of the test panel shall show that it will be possible to climb back onto the device. Assessment</p>  |     | N |

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|         | by assessment panel.  |  |   |
| 4.3.7   | Extreme high super structure (wind, drift)  |  | N |
| 4.3.7.1 | Requirements  |  | N |
|         | Floating articles of Class A having a superstructure which exceeds 100 cm above water level shall be restricted to pool use by marking them with the safety information symbol "Pool use only" according to ISO 25649-2.  |  | N |
| 4.3.7.2 | Test method   |  | N |
|         | Measure height of super structure of the floating device from floor to which the device is put to top of super-structure and check for safety information symbol if need be.  |  | N |
| 4.3.8   | Anchorage   |  | N |
| 4.3.8.1 | Requirements  |  | N |
|         | If a floating leisure article is equipped with an anchoring device, it shall be capable to hold the device in place up to a pulling force of 500 N. Testing shall be done according to 4.3.8.2.   |  | N |
| 4.3.8.2 | Test method   |  | N |
|         | Put the device in water with a depth of preferable (200 ± 20) cm. Activate anchoring device according to suppliers instructions. Length of anchoring rope shall be 5 times the water depth but not shorter than 6 m. For compensating the unnatural smooth surface of the test pool bottom fix a threshold board (preferably a steel rod) of 3 cm diameter or a board with the dimensions of (3 cm × 10 cm × 60 cm) on the pool bottom in a way that it hampers the anchoring bag from slipping.<br>Pool/nature: apply a horizontal pulling force of 500 N. Check whether the device stays in position (except the slip through tightening of the anchor cord). |  | N |
| 4.3.9   | Giant rings with bottom, strength of entire device  |  | P |
| 4.3.9.1 | General   |  | P |
|         | When tested in accordance with 4.3.9.2, no part or component of the body holding system or its attachment to the buoyant structure (welding seams) shall break or show any deficiency compromising safety.  |  | P |

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| 4.3.9.2 | Testing giant rings with bottom   |  | P |
|         | Place the device on an appropriate even surface in a way that the buoyancy structure is completely supported and the body holding system hangs freely downwards inside the opening as shown in Figure 3. Load the body holding system (bottom) with a dead weight representing the body mass of the maximum user of the designated body weight range. Load duration: 10 min, ambient temperature 20 °C.   |  | P |
| 5       | Consumer information  |  | P |
| 5.1     | General   |  | P |
|         | Consumer information (on the packaging, on the product and by means of written instructions for use) shall be in accordance with ISO 25649-2.   |  | P |
| 5.2     | Consumer information on the packaging (point of sale information)   |  | P |
|         | Information on the packaging of Class A products shall: <ul style="list-style-type: none"> <li>- show a picture or dimensional correct drawing of the floating article inside;</li> <li>- disclose via the appropriate safety information symbols any warning and restriction related to use and application;</li> <li>- disclose via the appropriate safety information symbols the maximum number of users and the maximum load capacity.</li> </ul>  |  | P |
| 5.3     | Consumer information on the product shall <ul style="list-style-type: none"> <li>- show via the appropriate safety information symbols all warnings and obligatory instructions related to the safe use of the product. Safety information symbols related to very serious risks shall be accompanied by the plain text version as specified in ISO 25649-2.</li> </ul> Very serious risks for Class A products are: <ul style="list-style-type: none"> <li>- Attention! No protection against drowning!</li> <li>- Swimmers only!</li> </ul> |  | P |
| 5.4     | Consumer information by instructions for use (separate written information)   |  | P |
| 5.4.1   | General   |  | P |
|         | Instructions of use shall be in accordance with   |  | P |



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|       | ISO 25649-2.  |  |   |
| 5.4.2 | Safety and product information  |  | P |
|       | Instruction for use shall contain all information provided in 5.1, 5.2 and 5.3. Warnings, obligatory instructions and all restrictions in use shall be explained in a way that they can be understood and perceived by the user. Safety information symbols shall be explained by their plain text version. |  | P |
| 5.4.3 | Assembly (if applicable)  |  | P |
|       | Instructions shall enable the user to assemble the floating article correctly and ready for safe use.   |  | P |
| 5.4.4 | Maintenance and repair (if applicable)  |  | P |
|       | Instructions shall enable the user to maintain store and repair the floating article correctly.   |  | P |

## Photo Of Sample



Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6

\*\*\*\*\* End Of Report \*\*\*\*\*