



SLOVENSKI STANDARD
SIST EN 393:1996/A1:2000

01-februar-2000

Rešilni jopiči in osebni plavalni pripomočki - Plavalni pripomočki - 50 N

Lifejackets and personal buoyancy aids - Buoyancy aids - 50 N

Rettungswesten und Schwimmhilfen - Schwimmhilfen - 50 N

Gilets de sauvetage et équipement individuel d'aide à la flottaison - Aide à la flottaison - 50 N

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Ta slovenski standard je istoveten z: EN 393:1993/A1:1998

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ICS:

13.340.70	Rešilni jopiči, vzgonska pomagala in plavajoči pripomočki	Lifejackets, buoyancy aids and floating devices
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SIST EN 393:1996/A1:2000

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 393:1993/A1

March 1998

ICS 97.220.40

Descriptors: rescue equipment, life jackets, buoyancy, specifications, dimensions, tests, marking

English version

Lifejackets and personal buoyancy aids - Buoyancy aids - 50 N

Gilets de sauvetage et équipement individuel d'aide à la
flottaison - Aide à la flottaison - 50 N

Rettungswesten und Schwimmhilfen - Schwimmhilfen - 50
N

This amendment A1 modifies the European Standard EN 393:1993; it was approved by CEN on 20 February 1998.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

This Amendment EN 393:1993/A1:1998 to the EN 393:1993 has been prepared by Technical Committee CEN/TC 162 "Protective clothing including hand and arm protection and lifejackets", the secretariat of which is held by DIN.

This Amendment to the European Standard EN 393:1993 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by month of September 1998, and conflicting national standards shall be withdrawn at the latest by month of September 1998.

This Amendment to the European Standard EN 393:1993 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

The purpose of Amendment 1 to EN 393 is to modify the existing text of clause 2, 4.9, 4.9.1, 6.4, 6.6, 6.7.7, 6.7.8, 6.9, 6.9.1, 6.9.2, 8, annex A, annex E, annex H, annex J.

As result of the 8th meeting of TC 162 WG 6 in Berlin 1993-06-02/04 and confirmed at the 9th meeting in Oslo 1994-02-02/04, all members state unanimously that the set of Standards EN 393, EN 396 and EN 399 require some modifications and interpretations. Further inquiries of manufacturers and testhouses proved that certain parts require comments and modifications.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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2 Normative references

Add the following standard:

EN 22768-1

General tolerances – Part 1: Tolerances for linear and angular dimensions without individual tolerance indications (ISO 2768-1 : 1989)

4.9 Inflatable buoyancy chambers

4.9.1 shall be modified as follows:

4.9.1 Inflatable buoyancy chambers having been stored for 24 h at a temperature of $-5\text{ }^{\circ}\text{C}$ and after 24 h at $30\text{ }^{\circ}\text{C}$ shall be capable of withstanding an internal pressure of 40 kPa without damage or permanent deformation. An inflatable section shall be tested afterwards in an ambient temperature $(20\pm 5)\text{ }^{\circ}\text{C}$ to an internal pressure of air at 3,5 kPa for 12 h during which it shall lose no more than 0,25 kPa pressure.

6.4 Security of protruding oral inflation valve

Change the wording as follows:

Following the conditioning of the buoyancy aid at $(-10\pm 2)\text{ }^{\circ}\text{C}$ for $(48\pm 0,5)$ h the stiction (meaning the initial sticking friction) between the oral inflation tube and valves which rely entirely on friction only for retention, shall then be broken by rotating the valve within the tube using pliers. Then, a force of (90 ± 1) N shall be applied to the valve in an attempt to extract it from the inflation tube, within 20 s of removal from the conditioning temperature. The security of the valve shall be observed. This test shall then be repeated following conditioning of the buoyancy aid at $(20\pm 2)\text{ }^{\circ}\text{C}$ for $(24,0\pm 0,5)$ h.

6.6 Thermal stability of buoyancy material

Change the first paragraph as follows:

Three test specimens of dimensions (200 ± 2) mm by (200 ± 2) mm of a thickness of (20 ± 2) mm shall be conditioned initially in air at $(23\pm 2)\text{ }^{\circ}\text{C}$ and $(50\pm 5)\%$ relative humidity for at least 24 h before carrying out the test. If the buoyancy material is of a granular form, or consist of sheets thinner than 20 mm, then either a number of layers shall be used to achieve a minimum total thickness of 20 mm, or a minimum volume of material of 1 l shall be tested, as appropriate.

Change 6.7.7 as follows:

6.7.7 For determination of the floating position of the buoyancy aid, the initial position shall be the near-vertical one achieved by each individual, and the subject shall breathe normally for a person in repose. The righting tendency of the buoyancy aid is determined from this initial position. For assessment of clearance the subject may balance in the vertical position by means of small head movements.

Change 6.7.8 as follows:

6.7.8 The test subject shall jump into the water from a height of $(3\ 000\pm 100)$ mm without displacement of, or damage to, the buoyancy aid, or injury to the test subject.

For the purposes of this test, the subject shall brace arms on the buoyancy aid as recommended by the manufacturer (or, failing any such recommendations, as is standard practice). Any elastic used to improve the fit of the garment shall be cut prior to the test.

6.9 Crushing and compression tests

Change this subclause as follows:

6.9.1 This test shall only be applied to buoyancy aids which contain no inflatable buoyancy. The buoyancy aid shall be laid, opened out on a flat rigid surface and a bag containing (25 ± 1) kg of dry sand with a base (200 ± 20) mm diameter shall be dropped three times from a height of (150 ± 10) mm onto various areas of the buoyancy aid. The buoyancy aid shall be examined for visible signs of damage which could make the buoyancy aid incapable of further repeated use.

6.9.2 This test shall only be applied to buoyancy aids which contain inflatable buoyancy. The uninflated buoyancy aid shall be subjected to the test described in annex J. Following this, the buoyancy aid shall be inflated for inspection. The buoyancy aid shall be examined for visible signs of damage which could make the buoyancy aid incapable of further repeated use.

8 Marking

Change clause 8 as follows:

8.1 Buoyancy aid

8.1.1 Consumer Information on the device

The buoyancy aid shall be permanently and legibly marked with the following (which shall be given at least in the official language(s) of the member state of destination). Information shall be given as pictograms, or as text combined with pictograms, or, if defined pictograms do not exist, as text alone.

- a) identification of the manufacturer;
- b) designation of the buoyancy aid in accordance with annex K;
- c) on an inflatable buoyancy aid, the statement that it is not a buoyancy aid until fully inflated;
- d) size range of the buoyancy aid e.g. range of chest or waist girth and mass of wearer;
- e) minimum buoyancy provided and amount of inflatable buoyancy if provided;
- f) storage, care, cleaning and maintenance instructions in brief;
- g) simple donning and adjustment instructions;
- h) simple instructions for use;
- i) if inflated by gas, the correct size and charge of the cylinder;
- j) the manufacturer's model designation, serial number, and quarter (or month) and year of manufacture. Months are to be given as Arabic numerals (1 to 12), and quarters as Roman numerals (I to IV) in order starting from 1st January;
- k) the numbers of the European standards to which it conforms;
- l) pictograms or words indicating other risks catered for or not provided for;
- m) the text "Do not use as a cushion";
- n) the text "For those who can swim and are close to help."

Any label bearing this information shall be permanently affixed to the buoyancy aid and stand at least 10 washes carried out in accordance with the manufacturer's recommendations. The label shall not shrink so as to affect the appearance or performance of the buoyancy aid or its own legibility.

8.1.2 Consumer information at point of sale

For satisfying the requirements concerning consumer information there are two options available: A plain text version and a pictogram version.

The information shall be clearly visible and legible when the device is presented ready for sale, either by ensuring visibility of a marking on the buoyancy aid itself or by additional labelling on the packaging. If the presentation of information is divided in various sections they shall be given such that the consumer can see all sections together.

8.1.2.1 Plain text version

Lifejacket	EN 395 / EN 396 / EN 399	(1)
Buoyancy Aid	EN 393	
Standard Application	Type	(2)
Offshore, extreme conditions Heavy protective clothing	275	(3)
Offshore, Foul weather clothing	150	(4)
Sheltered waters	100	(5)
Swimmers only, sheltered waters Help at hand Not a lifejacket	50	(6)
MANUFACTURER:	(standards.iteh.ai)	(7)
<p style="text-align: center;">SIST EN 393:1996/A1:2000 http://standards.iteh.ai/BuoyancyAids ONLY REDUCE THE RISK OF DROWNING THEY DO NOT GUARANTEE RESCUE</p>		(8)

Figure 1: Label specification

Lifejacket Buoyancy Aid	EN 395 / EN 396 / EN 399 EN 393	CE	Special features						
			Application			Canoeing, dinghy sailing, surfing			
Standard Application	Type		Fully automatic	Manual operation	Only oral inflation	Inflatable buoyancy	Inherent buoyancy	Integrated harness	May not be used with harness
Offshore extreme conditions, heavy protective clothing	275								
Offshore, foul weather clothing	150								
Sheltered waters	100								
Swimmers only, sheltered waters Help at hand Not a lifejacket	50						x		x
MANUFACTURER:			Fit	Size	Chest cm	Mass kg	Minimum buoyancy N		
				large	112 to 127	≥ 70	50/100/150/275		
			X	medium	99 to 112	60 to 70	45/ 80/130/230		
				small	86 to 99	50 to 60	40/ 70/110/200		
				child	76 to 86	40 to 50	40/ 60/ 90/170		
				child	66 to 76	30 to 40	35/ 50/ 75/140		
				child	50 to 66	20 to 30	- / 40/ 60/120		
				child	34 to 50	up to 20	- / 30/ 45/ 90		
LIFEJACKETS / BUOYANCY AIDS ONLY REDUCE THE RISK OF DROWNING THEY DO NOT GUARANTEE RESCUE									

Figure 2: Example of consumer information label (combination of figure 1 and data list in table configuration)

If the plain text version is chosen, the table as shown in figure 1 shall be laid out according to that figure and be of minimum dimensions 7,5 cm × 7,5 cm. Colours may vary, but shall be always contrasting to the background.

Information completing row 7, "MANUFACTURER", may be given as plain text or as a logo.

The table shown in figure 1 may form the left hand side of a complete label presenting all stipulated data (see figure 2).

The data list below includes all variable data enabling the consumer to be informed about performance and size of the device. All data shown as contents of the list may be given in the way as shown in figure 2 or by any other format and layout satisfying the requirements under 8.1.2.

8.1.2.2 Data list

The following information shall be given, if applicable:

a) it has to be stated whether the flotation device is a lifejacket or a buoyancy aid. For designation the generic terms specified in annex K shall be used.

b) statement of the relevant standard and type

The minimum height of letters and figures for a) and b) shall be 5 mm.

c) "SPECIAL FEATURES"*)

d) "SPECIAL APPLICATION"**)

Whether the lifejacket or buoyancy aid is:

e) fully automatic inflatable

f) manually inflatable

g) only orally inflatable

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Whether the buoyancy is provided by:

h) inherent buoyant material

i) gas, air (see also e to g)

j) inherently buoyant material and gas or air.

Amount of buoyancy:

k) in total

l) as parts of inherent and inflatable buoyancy

Whether a lifebelt:

m) is integrated in the device

n) can be worn on the body with the flotation device above

*) special features are given if the device offers more than the equipment and performance required by the standard, e.g.: integrated spray hood, performance under extreme climatic conditions, etc.

**) description of special applications, e.g.: applicable for working place conditions including stresses such as those arising from welding or metal grinding, or "not applicable for leisure use", etc.