TEST REPORT

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10.03.2023	

EUROLAB LABORATUVAR A.Ş.

EUROLAB Inspection & Testing Laboratory

Report No/ Rapor No :	2023031015
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Sample ID :	**LIFE JACKET** **MODEL:RITA,50N**

	TEST	METHOD	SPECIMEN	RESULT
-	**PERSONAL FLOTATION DEVICES - PART 5: BUOYANCY AIDS (LEVEL 50) - SAFETY REQUIREMENTS**	**EN ISO 12402-5**	**LIFE JACKET MODEL:RITA,50N**	**See TABLE**

NOTE: This test result replaces the conformity assessment, can be presented to official institutions, and used in products and brochures.

Seal

Customer Representative

Merve Nur KIRVELİ

Laboratory Manager

Merve ÖZLÜ

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12402-5:Personal flotation devices — Part 5: Buoyancy aids (level 50) — Safety requirements

Scope

This part of ISO 12402 specifies the safety requirements for buoyancy aids with a buoyancy of not less than 50 N used in sheltered waters with help and rescue close at hand under such circumstances where more bulky or buoyant devices can impair the user's activity. It applies to buoyancy aids used by adults or children.

	TEST METHOD AND TEST REQUEMENT	Result
4.	**Classification**	
4.1	**Classes**	
4.1.1	**Lifejackets**	
	These devices provide face-up flotation with levels of support sufficient for various open and rough water uses. Lifejackets have a buoyancy distribution sufficient to turn most users, when tested on users wearing swimming costumes according to ISO 12402, to a position where the mouth has a defined freeboard above the water's surface, even when the user is unconscious.	**N/a**
4.1.2	**Buoyancy aids**	
	These devices should be comfortable for continuous wear and provide lift, without significant face-up turning ability, to float the conscious user with the level of support marked on the device. Buoyancy aids shall at least be suitable for sheltered waters, but at higher performance levels may be suitable for some users in other waters.	**Pass**
4.1.3	**Special purpose lifejackets and buoyancy aids**	
	These devices perform as in 4.1.1 and 4.1.2 with different levels of support, but have modifications related to special applications for use. These applications shall not relate to essential requirements such as in-water performance, stability and safety in use. The specific conditions for use shall be stated on their label to maintain essential requirements.	**N/a**
4.2	**Performance levels**	
4.2.1	**Level 275**	
	This level is intended primarily for offshore use under extreme conditions. It is also of value to those who are wearing clothing which traps air and which may adversely affect the self-righting capacity of the lifejacket. It is designed to ensure that the user is floating in the correct position with his mouth and nose clear of the surface.	**N/a**
4.2.2	**Level 150**	
	This level is intended for general application or for use with foul weather clothing. It will turn an unconscious person into a safe position and requires no subsequent action by the user to maintain this position.	**N/a**
4.2.3	**Level 100**	
	This level is intended for those who may have to wait for rescue, but are likely to do so in sheltered water. The device should not be used in rough conditions.	**N/a**
4.2.4	**Level 50**	
	This level is intended for use by those who are competent swimmers and who are near to bank or shore, or who have help and a means of rescue close at hand. These	**Pass**

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<table>
<tr><td></td><td>garments have minimal bulk, but they are of limited use in disturbed water, and cannot be expected to keep the user safe for a long period of time. They do not have sufficient buoyancy to protect people who are unable to help themselves. They require active participation by the user.</td><td></td></tr>
<tr><td>5.</td><td>Requirements</td><td></td></tr>
<tr><td>5.1</td><td>General</td><td></td></tr>
<tr><td></td><td>A buoyancy aid shall meet the requirements specified in Clause 5 when tested in accordance with ISO 12402-9. The temperature cycling test and the rotating shock bin test shall be considered as reliability against wear and tear and shall be conducted prior to the appropriate physical properties test.</td><td>N/a</td></tr>
<tr><td></td><td>Materials and components used for a buoyancy aid shall comply with ISO 12402-7.</td><td>N/a</td></tr>
<tr><td></td><td>An inflatable buoyancy aid complying with this part of ISO 12402 shall have automatic, manual and oral inflation that allows for full compliance with all performance requirements of this part of ISO 12402. Each chamber of the inflatable buoyancy aid shall have at least manual and oral inflation. The inflatable buoyancy aid shall meet the performance requirements of this part of ISO 12402 with any one chamber deflated.</td><td>N/a</td></tr>
<tr><td>5.2</td><td>Combination of buoyancy aids and accessories</td><td></td></tr>
<tr><td>5.2.1</td><td>General</td><td></td></tr>
<tr><td></td><td>Accessories used on buoyancy aids shall comply with ISO 12402-8 as specified in Table 1.
Table 1 — Accessories for buoyancy aids
<table>
<tr><th>Accessory</th><th>Mandatory(M) / Optional(O)</th></tr>
<tr><td>Emergency light</td><td>O</td></tr>
<tr><td>Whistle</td><td>O</td></tr>
<tr><td>Lifting loop</td><td>O</td></tr>
<tr><td>Buddy line</td><td>O</td></tr>
<tr><td>Retroreflective material</td><td>M</td></tr>
<tr><td>Deck safety harness</td><td>O</td></tr>
<tr><td>Overpressure relief valve</td><td>O</td></tr>
<tr><td>Multi-chamber system</td><td>O</td></tr>
<tr><td>Protective covers</td><td>O</td></tr>
<tr><td>Sprayhood</td><td>O</td></tr>
</table></td><td>Fail

(There is no mandatory Retroreflective material.)</td></tr>
<tr><td>5.2.2</td><td>Lifting loop</td><td></td></tr>
<tr><td></td><td>If a buoyancy aid is provided with a lifting loop, it shall be tested according to ISO 12402-9:2006, 5.5.1.4.</td><td>Pass</td></tr>
<tr><td></td><td>The lifting loop shall be affixed to the buoyancy aid in front of the chest anterior to two lines, each axial to the midline between the lower end of the sternum and the umbilicus and no more than 100 mm to the side of the midline.</td><td>Pass</td></tr>
<tr><td></td><td>The minimum length of the loop shall be 150 mm, measured from attachment to end of the loop.</td><td>Pass</td></tr>
<tr><td></td><td>The lifting loop shall have a minimum width of 20 mm and shall be of a colour distinctive from that of the buoyancy aid.</td><td>Pass</td></tr>
<tr><td></td><td>The lifting loop shall be conspicuous when the user is floating normally.</td><td>Pass</td></tr>
</table>

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5.2.3	**Whistle**	
	The buoyancy aid can be provided with a whistle. The whistle shall comply with ISO 12402-8:2006, 5.2.	**N/a**
5.2.4	**Sprayhood**	
	If any form of hood or sprayhood is fitted to cover the face in whole or in part, it shall comply with ISO 12402-8:2006, 5.5 and be marked as specified therein.	**N/a**
5.3	**Types of buoyancy**	
5.3.1	**General**	
5.3.1.1	The amount of buoyancy shall be such that the in-water performance required by this part of ISO 12402 (freeboard, stable floating position, etc.) is met.	(Inherently buoyant material used) **Pass**
5.3.1.2	If the buoyancy aid is of a hybrid type, it shall provide by its inherent buoyancy alone, the buoyancy required of an equivalently sized device of level 50.	**Pass**
5.3.2	**Inflatable buoyancy chambers**	
5.3.2.1	Inflatable buoyancy chambers shall be capable of withstanding an internal pressure of 70 kPa without damage or permanent deformation when tested in accordance with ISO 12402-9:2006, 5.5.6 at a temperature of − 5 °C and + 30 °C for 2 min.	**N/a**
	If a device is operated with an overpressure relief valve, the valve has to be blocked and tested in accordance with ISO 12402-9:2006, 5.5.6 with 40 kPa.	**N/a**
5.3.2.2	Gas-inflated buoyancy aids shall withstand the inflation test in accordance with ISO 12402-9:2006, 5.5.10 before the buoyancy test in accordance with ISO 12402-9:2006, 5.5.9 is performed.	**N/a**
5.3.3	**Inherently buoyant material**	
5.3.3.1	Any inherently buoyant material used to provide buoyancy shall be capable of withstanding compression and movement in normal wear without sustaining permanent loss of buoyancy. The maximum loss of buoyancy when three samples are tested in accordance with ISO 12402-7:—4), 4.8 and 4.10 shall not exceed 10 % in any foam material providing inherent buoyancy.	**Pass**
5.3.3.2	Any inherently buoyant material shall prove to have a thermal stability in accordance with ISO 12402-7:—4), 4.8 and 4.10 in which the maximum loss of volume in any sample shall not exceed 5 %.	**Pass**
5.3.4	**Total buoyancy provided**	
5.3.4.1	For the purpose of assessment in accordance with this part of ISO 12402, items of different size are to be accompanied by stated minimum and maximum user's mass, which shall conform to the marked size ranges. The primary means of indicating the device's size as regards fit shall be one which is appropriate and meaningful to the prospective user, for instance the statement of mass and girth ranges.	**Pass (>70)**
5.3.4.2	When tested in accordance with ISO 12402-9:2006, 5.5.9, the minimum buoyancy provided by the different levels shall be as specified in Table 2.	**Pass (50 N)**

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<table>
<tr><td></td><td>
Table 2 — Minimum buoyancy
<table>
<tr><th rowspan="2">Parameter</th><th colspan="5">User</th></tr>
<tr><th>Child</th><th colspan="4">Adult</th></tr>
<tr><td>User's mass, m (kg)</td><td>25 < m ≤ 40</td><td>40 < m ≤ 50</td><td>50 < m ≤ 60</td><td>60 < m ≤70</td><td>70 < m</td></tr>
<tr><td>Minimum buoyancy (N)</td><td>35</td><td>40</td><td>40</td><td>45</td><td>50</td></tr>
</table>
</td><td></td></tr>
<tr><td>5.3.4.3</td><td>If the buoyancy aid is intended for two or more mass categories, the buoyancy shall be at least as specified for the heavier category.</td><td></td></tr>
<tr><td>5.3.4.4</td><td>The buoyancy of the buoyancy aid shall be tested in accordance with ISO 12402-9:2006, 5.5.9.
The difference between the initial measurements and the measurement after 24 h shall not exceed 5 % of the original buoyancy.</td><td>Pass</td></tr>
<tr><td></td><td>The buoyancy measured in any test carried out for the purpose of ascertaining conformity with this part of ISO 12402 shall not be less than that claimed on the marking of the buoyancy aid, nor less than that required in 5.3.4.2.</td><td>Pass</td></tr>
<tr><td>5.3.4.5</td><td>The two buoyancy aids which were subjected to the test in accordance with ISO 12402–9:2006, 5.5.9 shall be used to measure the total buoyancy.</td><td>N/a</td></tr>
<tr><td>5.4</td><td>Conspicuousness</td><td></td></tr>
<tr><td>5.4.1</td><td>Colour</td><td></td></tr>
<tr><td></td><td>Buoyancy aids may be of any colour or multiple colours.</td><td>Pass</td></tr>
<tr><td>5.4.2</td><td>Retroreflective material</td><td></td></tr>
<tr><td></td><td>There shall be affixed to the surface of the buoyancy aid at least 100 cm2 area of material which is retroreflective of light and conforms to the specification in IMO Resolution A.658(16), Annex 2.</td><td>N/a</td></tr>
<tr><td></td><td>When supporting the user at rest in the water, approximately the same amount of material shall be visible from all directions around and above the buoyancy aid and the material shall be located above water level.</td><td>N/a</td></tr>
<tr><td>5.5</td><td>Strength</td><td></td></tr>
<tr><td></td><td>The strength of the device shall be tested in accordance with ISO 12402-9:2006, 5.5.1. No damage shall occur which would result in the buoyancy aid failing to function in accordance with this part of ISO 12402. The means of adjustment shall not have a slippage exceeding 25 mm when subjected to the test.</td><td>Pass</td></tr>
<tr><td></td><td>The horizontal load shall be no less than 2000 N for adults and children.</td><td>-</td></tr>
<tr><td></td><td>The vertical load shall be no less than 750 N for adults and children.</td><td>-</td></tr>
<tr><td>5.6</td><td>Performance</td><td></td></tr>
<tr><td>5.6.1</td><td>General</td><td></td></tr>
<tr><td>5.6.1.1</td><td>When worn, the buoyancy aid shall not be unduly bulky, heavy or uncomfortable when tested in accordance with ISO 12402-9:2006, 5.5 and 5.6.</td><td>Pass</td></tr>
<tr><td>5.6.1.2</td><td>The buoyancy aid shall not unduly restrict the vision, hearing, breathing or movement of the user when worn both ashore and in the water and tested in accordance with ISO 12402-9:2006, 5.6. It shall allow easy tightening and loosening of all essential adjustments both ashore and in the water. The buoyancy aid shall not interfere with vision when worn both ashore and in the water and shall allow sufficient comfort, and head and limb movement to preclude it from being removed because of encumbrance or discomfort during emergency use both ashore and in the water.</td><td>Pass</td></tr>
</table>

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5.6.1.3	The buoyancy aid shall not contain any component nor use any method of component attachment which in normal use is likely to cause injury to the user or damage the buoyancy aid when tested in accordance with ISO 12402-9:2006, 5.5 and 5.6.	**Pass**
5.6.1.4	The buoyancy aid shall not significantly hinder dexterity.	**N/a**
5.6.1.5	The buoyancy aid shall withstand all tested conditions of normal storage and use.	**N/a**
5.6.1.6	The buoyancy aid shall not form channels having a tendency to direct water into the face or to the head of the user.	**N/a**
5.6.1.7	Automatic inflatable buoyancy aids shall be tested against inadvertent inflation in accordance with ISO 12402-9:2006, 5.5.11.	**N/a**
5.6.2	**Donning, adjustment and fit**	
5.6.2.1	The buoyancy aid shall have a proper fit and adjustment. It shall be easy to don. Ties and fastenings necessary for proper performance should be few and simple.	**Pass**
5.6.2.2	Donning shall be obvious and simple on the briefest of instructions. It shall be possible without assistance, except children's buoyancy aids. The ease in donning and discarding the buoyancy aid shall not be unduly affected by adverse conditions in use such as poor light, cold or wet. When tested in accordance with ISO 12402-9, donning by all means of securing the buoyancy aid required to meet the in-water performance requirements shall take no longer than 1 min.	**Pass**
5.6.2.3	When tested in accordance with ISO 12402-9, the means of adjustment within the stated size range shall ensure a secure fit. Security of fit shall not be dependent upon highly elastic material. If crotch straps or other non-elastic devices for improving the security of fit and retention are provided, and it is possible (without physically damaging the buoyancy aid) to wear the lifejacket with and without the straps or devices, the tests in accordance with ISO 12402-9:2006, 5.6.4 and 5.6.5 shall be performed with and without the straps or devices in place.	**Pass**
5.6.2.4	The user shall not slip out of the buoyancy aid when tested in accordance with ISO 12402-9.	**Pass**
5.6.2.5	Manual and oral inflation shall be tested both in and out of water in accordance with ISO 12402-9:2006, 5.6.5 and 5.6.7.	**N/a**
5.6.3	**In-water performance**	
5.6.3.1	A buoyancy aid shall provide lateral and occipital support of the user's body so that the mouth of a relaxed individual is held clear of a still water surface, with the trunk of the body inclined vertical to backwards when tested in conformance with ISO 12402-9:2006, 5.6.	**Pass**
	All tests are to be carried out with at least six persons as specified in ISO 12402-9:2006, 5.6 in fresh water under still conditions. The test subjects have to be good swimmers. They shall wear swimming costumes only. Each test subject has to be made familiar with each of the tests, particularly the requirements regarding relaxing and exhaling in the face-down position. The test subjects have to don the buoyancy aid, unassisted, using only the instructions provided by the manufacturer. The individual freeboard for each subject measured in accordance with ISO 12402-9:2006, 5.6.2 shall be positive.	**Pass**
5.6.3.2	When the buoyancy aid is in an operational condition, it shall permit the test subject to turn into the position required by 5.6.3.1 within 5 s when tested in accordance with ISO 12402-9:2006, 5.6.	**Pass**
5.7	**Multi-chamber buoyancy systems**	

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	Multi-chamber buoyancy systems shall meet the performance requirements of this part of ISO 12402 with any one chamber deflated. Multi-chamber systems shall conform with ISO 12402-8:2006, 5.7.	**N/a**
6	**Marking**	**-**
6.1	**General**	**-**
	The buoyancy aid shall be permanently and legibly marked with the information given in 6.2, which shall be given at least in the official language(s) of the country of destination. Information shall be given preferably as pictograms, or as text combined with pictograms, or, if defined pictograms do not exist, as text alone.	-
6.2	**Information on the buoyancy aid**	**-**
	Information on the buoyancy aid shall include the following items:	-
	a) identification of the manufacturer – at least the name of the manufacturer or representative and their mailing address;	-
	b) the class of the PFD and the performance level according to 4.2;	-
	c) the statement that it is not a PFD until fully inflated (only on an inflatable PFD);	-
	d) the size range of the buoyancy aid, e.g. range of chest girth and user's body mass;	-
	e) the minimum buoyancy provided and amount of inflatable buoyancy, if a hybrid type;	-
	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) if inflated by gas, a warning that gas cylinders are dangerous goods, and that they shall be kept away from children and not misused;	-
	k) the manufacturer's model, designation, serial number, and quarter (or month) and year of manufacture;	-
	l) the number of this part of ISO 12402;	-
	m) pictograms or words indicating other risks catered for or not provided for;	-
	n) the text "Do not use as a cushion";	-
	o) the text "Train yourself in the use of the device";	-
	p) the text "Teach the child to float in this buoyancy aid", if intended for children;	-
	q) the text "For children less than 6 years of age use automatically operating devices only", if intended for children;	-
	r) the range of its specific application;	-
	s) the expected servicing interval assuming average use, and a space for servicing dates to be marked, including additional items (gas bottles, bobbins, retroreflective tapes, etc.) and their replacement;	-
	t) compatibility with safety harnesses, clothing or additional equipment as relevant;	-
	u) the text "Full performance may not be achieved using waterproof clothing or in other circumstances. Refer to the leaflet.";	-

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	v) the text “Warning: Do not apply diapers which provide buoyancy when using the buoyancy aid.”.	-
7	**Information supplied by the manufacturer**	-
	The buoyancy aid shall be supplied with an explanatory leaflet containing at least the following items:	-
	a) items given in 6.2;	-
	b) the recommendation that the user should try out the buoyancy aid to ascertain its performance before use;	-
	c) full instructions for donning and use (also instructions for whistle and light if fitted);	-
	d) details of the recommended limitations on use, including sea conditions, temperature limits, life span and any other pertinent information;	-
	e) a description of any spare parts and their replacement, instructions for servicing, maintenance, and packing, if applicable;	-
	f) such other general advice on the care and use of the lifejacket as the manufacturer sees fit.	-
NOTE:	Since there is no labeling on the product and the necessary information was not conveyed to us by the manufacturer, the 6th and 7th items could not be evaluated.	

**** N/A: Not Applicable***

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Sample Images

End of Report

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