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Aerospace series - Rotorcraft constant wear lifejackets
- Requirements, testing and marking



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Aerospace series - Rotorcraft constant wear lifejackets - Requirements, testing and marking

Série aéronautique - Gilets de sauvetage de port
permanent de giravion - Exigences, essais et marquage

Luft- und Raumfahrt - Drehflüglerrettungswesten zum
ständigen Tragen - Anforderungen, Prüfung und
Kennzeichnung

This European Standard was approved by CEN on 29 August 2022.

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European foreword

This document (EN 4862:2023) has been prepared by the Aerospace and Defence Industries Association of Europe — Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this document has received the approval of the National Associations and the Official Services of the member countries of ASD-STAN, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2023, and conflicting national standards shall be withdrawn at the latest by November 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

This document prescribes the minimum standards of design and performance for rotorcraft constant wear lifejackets, used to reduce the risks of drowning following evacuation or escape from a rotorcraft. Lifejackets are designed to support the user in water, keep the head above the water, protect the airways from wave splash and provide some stability in the face-up position. Depending upon the conditions of use a lifejacket may turn the user from a face-down to a face-up position in the water. Lifejackets are also equipped with items intended to aid in the location of a survivor in the water. These include a survivor locator light, whistle and retroreflective material.

The document aims to ensure that the equipment user is able to carry out the necessary emergency procedures whilst being provided with an appropriate level of protection under foreseeable conditions of use. It aims to ensure that the equipment presents a minimal hazard in relation to escape from the rotorcraft, and that the equipment has no detrimental effect on the health and safety of the user or on the performance of other equipment. There is also a need to ensure that the lifejacket does not prevent or hinder crew members from carrying out all normal operating procedures and allows them to access all flight controls.

This document is applicable to all rotorcraft. Rotorcraft include helicopters, tilt rotor/wing and gyroplanes. For the purpose of this document the term helicopter is used generically hereinafter.

1 Scope

This document specifies requirements for constant wear lifejackets for use by helicopter crew members and passengers in the event of a ditching or water impact, to ensure minimum levels of performance. It only applies to constant wear lifejackets for use by adults and that are intended to be manually inflated after leaving the helicopter.

Helicopter constant wear lifejackets are sometimes designed to be worn with or without a helicopter immersion suit and/or emergency breathing system.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 4856, *Aerospace series — Rotorcraft Emergency Breathing Systems (EBS) — Requirements, testing and marking*

EN 4863, *Aerospace series — Rotorcraft immersion suits — Requirements, testing and marking*

EN 4886,¹ *Aerospace series — Rotorcraft life raft — Requirements, testing and marking*

EN ISO 105-E02, *Textiles — Tests for colour fastness — Part E02: Colour fastness to sea water (ISO 105-E02)*

EN ISO 105-X12, *Textiles — Tests for colour fastness — Part X12: Colour fastness to rubbing (ISO 105-X12)*

EN ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests (ISO 9227)*

EN ISO 12401, *Small craft — Deck safety harness and safety line — Safety requirements and test methods (ISO 12401)*

EN ISO 12402-7, *Personal flotation devices — Part 7: Materials and components — Safety requirements and test methods (ISO 12402-7)*

EN ISO 12402-8, *Personal flotation devices — Part 8: Accessories — Safety requirements and test methods (ISO 12402-8)*

ISO 105-A02, *Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour*

ISO 2768-1, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*

ASTM D1655-21b, *Standard Specification for Aviation Turbine Fuels*

CIE publication No. 15, *Colorimetry*

DEF STAN 91-091, *Turbine Fuel, Kerosine Type, JET A-1; NATO Code: F-35; JSD: AVTUR*

EASA, *Certification Specifications and Acceptable Means of Compliance for Large Aeroplanes, CS-25, Book 1 — Appendix F*

¹ Under preparation.

EASA, ETSO-C85b, *Survivor Locator Lights*

IATA, *Guidance Material (Kerosene Type), NATO Code F-35*

IMO, Resolution A.658(16), *Use and Fitting of Retro-Reflective Materials on Life-Saving Appliances*

IMO, International Life-Saving Appliance (LSA) Code, adopted by Resolution MSC.48(66), (as amended)

IMO, Resolution MSC.81(70) (adopted on 11 December 1998) *Revised recommendation on testing of life-saving appliances*

MIL-STD-3009, *Lighting, Aircraft, Night Vision Imaging System (NVIS) Compatible*

SAE ARP5825A, *Design Requirements and Test Procedures for Dual Mode Exterior Lights*

SAE AS4492A, *Survivor Locator Lights*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp/>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

lifejacket

garment or device which, when correctly worn and used in water will provide the user with buoyancy positioned to provide protection from drowning and increase the likelihood of survival and rescue

3.2

helicopter constant wear lifejacket

lifejacket worn on the body throughout a helicopter flight, provided to protect the user in the event of a ditching or water impact

3.3

buoyancy chamber

inflatable component of a lifejacket or integrated immersion suit

3.4

immersion suit

garment designed to protect the user's body from the cooling effects of unintended immersion in water

Note 1 to entry: Cooling effects include cold shock and hypothermia.

Note 2 to entry: An immersion suit may be integrated or worn with a separate constant wear lifejacket.

3.5

integrated immersion suit

immersion suit that incorporates the functionality of a lifejacket

3.6

buoyancy element

inflatable chamber incorporated into an integrated immersion suit that, when inflated, provides the suit with the functionality of a lifejacket