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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 46090-2025

**Ships and marine technology - Personal and group survival kit
for use in polar water**

船舶和海上技术 用于极地水域的个人和集体求生工具

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is equivalent to ISO 24452:2023 "Ships and marine technology for personal and collective survival tools in polar waters".

The following minimal editorial changes have been made to this document.

---In Figure 1, "MDLT $\leq$ -10°C" should be changed to "MDLT $<$ -10°C";

---In section 6.1.1, change "Table A.1" to "Table B.1";

---Change "5.7" in 6.11 to "5.6".

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Technical Committee on Ship Outfitting Standardization (SAC/TC129).

Introduction

This document contains provisions in accordance with the International Maritime Organization (IMO) Code for the Operation of Ships in International Polar Waters (hereinafter referred to as the "Polar Code").

Detailed specifications for various lifesaving devices in Personal Survival Kits (PSKs) and Group Survival Kits (GSKs) as required by law.

According to the Polar Code, ship owners or operators conduct risk assessments to determine or adjust the tools required for vessels operating in polar waters.

(PSK or GSK) and the number of devices carried in the tool.

Based on the latest research in the marine industry, this document sets minimum requirements for personal and collective survival tools, aiming to supplement the needs of rescue in polar waters.

IMO requirements for life support equipment [4]. This document aims to provide information on how to increase the survival chances of all people in polar waters, and how to shorten the time required for survival.

Search duration to minimize the time people are exposed to harsh environments and how to improve people's self-rescue capabilities.

This document is based on the assumption that thermal equilibrium can be maintained through insulation alone. Active heating equipment can be used as an alternative design, provided it can achieve the desired results.

Repair and maintenance are required to ensure its reliability, and the maintenance cycle should be the same as that of the lifeboats carrying the equipment (see references [5], [6]).

[7]), and the power supply of the active heating equipment can remain operational for the longest expected rescue time (see IMO MSC.1/Circ.1614.2019).

(4.4)[4]. For cases using alternative designs, the thermal resistance formula in 4.3 of this document can be modified, as it only applies to passive systems. Although While this document discusses cover in the section on collective survival tools, it does not cover the use of lifeboats as cover or other temporary cover.

To distinguish them, when lifeboats are used as shelter, they are not expected to meet the requirements of sections 6.1.6 to 6.1.9 of this document. Furthermore, additional considerations are required.

Ensure the lifeboat is secured to the snow/ice/land.

Ships and marine technology used in polar waters Personal and collective survival tools

1 Scope

This document specifies the design and performance of lifesaving equipment that is a component of Personal Survival Kits (PSKs) and Group Survival Kits (GSKs).

The tools and their usage methods comply with the revised 1974 International Convention for the Safety of Life at Sea (SOLAS Convention 1974).

In particular, Chapter XIV as amended by MSC.386(94) and the Polar Code (as amended by MSC.385(94) and MEPC.264(68)).

The requirements of the proposed revision.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 44139.1-2024 Requirements for sleeping bags - Part 1: Thermal properties, mass spectrometry, and thermal performance of sleeping bags designed for extreme low temperatures above -20°C Quantity and dimensional requirements (ISO 23537-1:2022, IDT) Note. GB/T 32234.8-2015 Personal buoyancy equipment - Part 8: Safety requirements and test methods for accessories (ISO 12402-8:2006, IDT) Note. GB/T 32081-2015 Life-saving equipment for marine and marine technical lifeboats and rescue boats (ISO 18813:2006, IDT) insulation) Note. GB/T 21284-2015 Footwear - Test Methods for Thermal Insulation (ISO 20877:2011, IDT) ISO 24444:2019 Cosmetic sunscreen test methods - Determination of sun protection factor (SPF) in vivo [Cosmetics-Sun] goggles) NSF/ANSI 173 Dietary Supplements