

ICS 13.340.30

CCS C 73



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

GB 38228-2025

Replacing GB/T 38228-2019

**Respiratory protection - Self-contained closed-circuit oxygen
breathing apparatus for escape**

呼吸防护 自给闭路式氧气逃生呼吸器

Issued on: August 29, 2025

Implemented on: September 1, 2026

Issued by: Ministry of Emergency Management

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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 supersedes GB/T 38228-2019 "Respiratory Protective Equipment - Self-Contained Closed-Circuit Oxygen Escape Breathing Apparatus" and is consistent with GB/T 38228-2019. In comparison, aside from structural adjustments and editorial changes, the main technical changes are as follows:

- a) The term and definition of "self-contained closed-circuit oxygen escape breathing apparatus" have been added (see 3.2);
- b) The gas supply for the D-type respirator has been changed (see 5.3.9.2, 2019 version 5.3.9.2). 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 Ministry of Emergency Management of the People's Republic of China. The release history of this document and the document it replaces is as follows:

---First published in 2019 as GB/T 38228-2019;

---This is the first revision. Respiratory protection self-contained closed-circuit oxygen escape respirator

1 Scope

GB 38228-2025 is the Chinese national standard on respiratory protection - self-contained closed-circuit oxygen breathing apparatus for escape, in the field of environment and health protection, safety. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold

or carried out in China. It was issued on 29 August 2025 by the Ministry of Emergency Management, and has been in force since 1 September 2026. Classification: ICS 13.340.30, CCS C 73. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the technical requirements, labeling, and packaging for self-contained closed-circuit oxygen breathing apparatus (hereinafter referred to as "breathing apparatus") used for escape, and provides... Classification, grading, and labeling describe the corresponding experimental methods. This document applies to breathing apparatus used for escape from workplaces and public places (including escape from hazardous chemical accidents). This document does not apply to breathing apparatus used for escape during diving operations.

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 2410 Determination of light transmittance and haze of transparent plastics

GB 2626-2019 Respiratory Protection - Self-priming Filtering Respirators for Particulate Matter

GB 2890-2022 Respiratory Protective Self-priming Filtering Gas Mask

GB/T 3836.1-2021 Explosive Atmospheres - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 12903 and GB 24502-2023, as well as the following terms and definitions, apply to this document.

3.1 This method isolates the human respiratory system from the atmospheric environment, uses chemical oxygen generators or compressed oxygen as the oxygen source, and absorbs the exhaled carbon dioxide. It retracts to form a complete breathing cycle, providing a respirator for use by the wearer in hypoxic and/or toxic gas environments.

3.2 A type of self-contained closed-circuit oxygen respirator designed solely for use by the wearer to escape from environments lacking oxygen or containing toxic or harmful gases.

3.3 Rated working duration The operating time of the respirator was measured under

specified test conditions.

3.4 Carrying container A container used for holding and carrying respirators when not in use.

3.5 mouthpiece assembly A device that allows air to enter and exit by biting with teeth or by supporting the teeth and headband, with the nose closed by a nose clip and the lips closed.

Note. The mouthpiece assembly includes the mouthpiece, nose clip, and fixing device.

3.6 breathing bag A gas storage device that compensates for changes in gas supply demand and provides peak flow rate during the intake process.

3.7 relief valve A one-way valve that releases excess pressure in the breathing bag.

4 Classification, grading, and labeling

4.1 Classification By oxygen source.

- a) The oxygen source is NaClO_3 , designated as oxygen-generating agent, symbol. C;
- b) The oxygen source is compressed oxygen, designated by code D;
- c) The oxygen source is oxygen-generating agent KO_2 , labeled as K.

4.2 Classification According to the rated protection time (t), it is divided into four levels. 10min, 15min, 20min, and 30min.

- a) $10\text{min} \leq t < 15\text{min}$, marked with code. 10;
- b) $15\text{min} \leq t < 20\text{min}$, marked with code. 15;
- c) $20\text{min} \leq t < 30\text{min}$, marked with code. 20;
- d) $t \geq 30\text{min}$, mark code. 30.

4.3 Marking The product label consists of four parts. name, document number and year, respirator category and level. Example

1. An escape oxygen breathing apparatus with a rated protection time of 20 minutes and an oxygen source of NaClO_3 is labeled as. Oxygen Escape Breathing Apparatus Example

2. An escape oxygen breathing apparatus with a rated protection time of 15 minutes and an oxygen source of KO_2 oxygen-generating agent is labeled as. Oxygen Escape Breathing Apparatus Example

3. An escape oxygen breathing apparatus with a rated protection time of 30 minutes and an oxygen source of compressed oxygen is marked as. Oxygen Escape Breathing Apparatus GB 38228- 2025D30.