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

GB 20128-2024

Inert gas extinguishing agent

惰性气体灭火剂

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting is required. This document replaces GB.20128-2006 "Inert Gas Fire Extinguishing Agents". Compared with GB.20128-2006, except for structural adjustments and editorial In addition to the modifications, the main technical changes are as follows:

- a) The definition of inert gas fire extinguishing agent has been changed (see 3.1, 3.1 of the.2006 edition);
- b) The purity technical performance requirements for argon and carbon dioxide in the raw material (component) gases have been changed (see 4.2.1 Table 1,.2006 Edition).

c) The technical performance requirements for the moisture content of argon and nitrogen in the raw (component) gases have been changed (see

4.2.1 Table 1,.2006 Edition).

d) Added technical performance requirements for the total sulfide content of carbon dioxide in the raw (component) gas (see

e) The technical performance requirements for suspended matter or sediment of IG-01 inert gas fire extinguishing agent (Table 1 of

4.2.1 of the.2006 edition) have been deleted;

f) Added technical performance requirements for oxygen content of IG-01 inert gas fire extinguishing agent (see

g) Changed the technical performance requirements for nitrogen content and oxygen content of IG-100 inert gas fire extinguishing agent (see

4.2.3 Table 3,.2006 Edition).

1 Scope

GB 20128-2024 is the Chinese mandatory standard for inert gas extinguishing agents, the nitrogen, argon and carbon dioxide blends that have replaced halon in occupied spaces because they extinguish by displacing oxygen to a level a person can still survive, and because they have no ozone depletion and negligible global warming potential. That mechanism is what makes the composition critical: the design concentration is calculated from the blend, so a batch outside its tolerance either fails to extinguish or leaves an atmosphere that cannot be breathed. The standard sets the classification of the agents by composition and the requirements for each, the proportion of each component and its tolerance, the purity of the constituent gases, the moisture and the limits on impurities; then the test methods, principally gas chromatography together with the moisture determination; then the inspection rules and the sampling; and then the marking, packaging, transport and storage with the cylinder requirements. It is mandatory in China and takes effect on 1 December 2025.

This document defines the terms and definitions of inert gas fire extinguishing agents, and specifies the requirements, inspection rules, marking, filling and Packaging, packaging, transportation and storage, and the corresponding test methods are described. This document applies to the research and development, production and inspection of inert gas fire extinguishing agent products.

2 Dew point method

GB/T 6285 Determination of trace oxygen in gases - Electrochemical method

GB/T 8979 Pure nitrogen, high purity nitrogen and ultra-pure nitrogen

GB/T 14194 Compressed gas cylinder filling regulations

GB 16670 Cabinet type gas fire extinguishing device

GB 25972 Gas fire extinguishing systems and components

GB/T 27550 Safety technical requirements for gas cylinder filling stations

GB/T 34525 Safety regulations for the handling, loading and unloading, storage and use of gas cylinders

GB/T 34526 Provisions for filling mixed gas cylinders TSG

23 Gas Cylinder Safety Technical Regulations

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Gas extinguishing agent composed of one of nitrogen, argon and carbon dioxide (except carbon dioxide) or a mixture of several gases in a specified proportion. Fire agent.

3.2 A gaseous fire extinguishing agent composed solely of argon.

3.3 A gaseous fire extinguishing agent composed solely of nitrogen.