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

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Condensed aerosol fire extinguishing equipment

热气溶胶灭火装置

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Foreword

This document was drafted in accordance with the rules given in GB/T 1.1-2020 "Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents".

Attention is drawn to the possibility that some of the content of this document may be the subject of patent rights. The issuing body of this document bears no responsibility for identifying such patent rights.

This document was proposed by, and is under the jurisdiction of, the National Fire and Rescue Administration.

Introduction

Where the raw materials and the components used in the condensed aerosol fire extinguishing equipment described in this document are civil explosive articles or hazardous chemicals, the corresponding safety management requirements are laid down in the Regulations on the Safety Management of Civil Explosive Articles, the Regulations on the Safety Management of Hazardous Chemicals, the Measures for the Public Security Administration of Hazardous Chemicals Readily Convertible to Explosives and other such documents. This document is used together with those documents.

Warning

The test procedures covered by this document may involve a risk of explosion, electric shock and asphyxiation; test personnel shall take appropriate safety measures.

1 Scope

This document specifies the requirements, the inspection rules, the requirements for drafting the instruction manual and the marking, packaging and storage of condensed aerosol fire extinguishing equipment; it gives the classification and the method of composing the model designation, and describes the corresponding test methods.

This document applies to pipeless condensed aerosol fire extinguishing equipment in which the mass of the compound forming the aerosol fire extinguishing agent is not greater than 3 kg.

This document does not apply to hand-held condensed aerosol fire extinguishing equipment or to condensed aerosol fire extinguishing equipment used in locations with an

explosion hazard.

2 Normative references

The contents of the following documents constitute indispensable provisions of this document through normative reference in the text. For dated references, only the edition corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document.

GB 190 Packing symbol of dangerous goods · GB/T 191 Packaging - Pictorial marking for handling of goods · GB 4066-2017 Dry powder fire extinguishing agent · GB/T 9174 General rules for packaging of goods in transportation · GB/T 9969 General principles for preparation of instructions for use of industrial products · GB 12463 General technical requirements for packaging of dangerous goods for transport · GB/T 25208-2010 Environmental test methods for fixed fire extinguishing system products · XF 61-2010 General technical requirements for driving and control devices of fixed fire extinguishing systems

3 Terms and definitions

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

3.1 Condensed aerosol fire extinguishing agent

The fire extinguishing substance produced by the aerosol fire extinguishing agent forming compound through a combustion reaction.

3.2 Compound forming aerosol fire extinguishing agent

The solid chemical mixture that produces the condensed aerosol fire extinguishing agent (3.1) through a combustion reaction.

Note: it generally consists of an oxidizer, a reducer and additives.

3.3 Condensed aerosol fire extinguishing agent generator

The assembly in which the compound forming the aerosol fire extinguishing agent (3.2) is formed to the design requirements and fitted with the initiating charge.

3.4 Condensed aerosol fire extinguishing equipment

Equipment that makes the compound forming the aerosol fire extinguishing agent (3.2) produce the condensed aerosol fire extinguishing agent (3.1) through a combustion reaction.

Note 1: it usually consists of an actuating device, a condensed aerosol fire extinguishing

agent generator (3.3), a coolant (cooling equipment), a feedback element (where applicable) and an enclosure.

Note 2: condensed aerosol fire extinguishing equipment is referred to below as "the extinguishing equipment".

3.5 Actuating device

The component able to supply, by electrical, thermal, chemical, mechanical or other means, the initial energy necessary for the combustion reaction of the compound forming the aerosol fire extinguishing agent (3.2).

3.6 Extinguishing application density

The mass of the compound forming the aerosol fire extinguishing agent (3.2) needed to extinguish a fire of a given combustible in a unit volume of space.

Note: the unit of extinguishing application density is grams per cubic metre (g/m³).

3.7 Discharge lagging time

The time from the reception of the actuating signal by the extinguishing equipment to the beginning of the discharge of the condensed aerosol fire extinguishing agent (3.1) from the discharge port.

3.8 Discharge time

The time from the beginning to the end of the discharge of the condensed aerosol fire extinguishing agent (3.1) from the discharge port.

3.9 Extinguishing time

The time from the beginning of the discharge of the condensed aerosol fire extinguishing agent (3.1) from the discharge port to the extinction of the open flame.

3.10 Coolant (cooling equipment)

The medium or the device installed inside the extinguishing equipment that effectively lowers the temperature of the condensed aerosol fire extinguishing agent (3.1) before it passes through the discharge port.

3.11 Thermal clearance

The distance between the discharge port and the point at which the condensed aerosol fire extinguishing agent (3.1) discharged by the extinguishing equipment reaches a specified temperature, during the discharge.