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Gaseous fire-extinguishing systems — Physical properties and system design —

Part 10: HFC 23 extinguishant

Systèmes d'extinction d'incendie utilisant des agents gazeux — Propriétés physiques et conception des systèmes —

Partie 10: Agent extincteur HFC 23

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 21, *Equipment for fire protection and fire fighting*, Subcommittee SC 8, *Gaseous media and firefighting systems using gas*.

This fourth edition cancels and replaces the third edition (ISO 14520-10:2016), which has been technically revised. The main changes compared to the previous edition are as follows

— a new subclause 6.4 on fill density and superpressurization levels has been added.

A list of all parts in the ISO 14520 series can be found on the ISO website.

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Gaseous fire-extinguishing systems — Physical properties and system design —

Part 10:
HFC 23 extinguishant

1 Scope

This document contains specific requirements for gaseous fire-extinguishing systems, with respect to the HFC 23 extinguishant. It includes details of physical properties, specifications, usage and safety aspects. It is applicable to systems operating at a nominal pressure of 41 bar without nitrogen superpressurization and 70 bar superpressurized with nitrogen.

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.

ISO 14520-1:2015, *Gaseous fire-extinguishing systems — Physical properties and system design — Part 1: General requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 14520-1 apply.

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

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

4 Characteristics and uses

4.1 General

Extinguishant HFC 23 shall comply with the specification shown in Table 1.

HFC 23 is a colourless, almost odourless, electrically non-conductive gas with a density approximately 2,4 times that of air.

The physical properties are shown in Table 2.

HFC 23 extinguishes fires mainly by physical means, also by some chemical means.

Table 1 — Specification for HFC 23

Property	Requirement
Purity	99,6 % (mol/mol), min.
Acidity	3×10^{-6} by mass, max.

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