AS ISO 14520.14—2009

Australian Standard®

Gaseous fire-extinguishing systems—Physical properties and system design

Part 14: IG-55 extinguishant (ISO 14520-14:2005, MOD)

This Australian Standard® was prepared by Committee FP-011, Special Hazard Fire Protection Systems. It was approved on behalf of the Council of Standards Australia on 9 September 2009.
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- Australian Industry Group
- Australian Museum
- Commerce Queensland
- CSIRO Manufacturing and Materials Technology
- Department of Defence (Australia)
- Engineers Australia
- Fire Protection Association Australia
- Institute of Security Executives
- National Fire Industry Association
- Society of Fire Protection Engineers Australasian Chapter

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Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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Gaseous fire-extinguishing systems—Physical properties and system design

Part 14: IG-55 extinguishant (ISO 14520-14:2005, MOD)

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PREFACE

This Standard was prepared by the Standards Australia Committee FP-011, Special Hazard Fire Protection Systems, to supersede Appendix G of AS 4214—2002, *Gaseous fire extinguishing systems.*

This Standard is an adoption with Australian modifications and has been reproduced from ISO 14520-14:2005, *Gaseous media fire-extinguishing systems—Physical properties and system design*—Part 14: *IG-55 extinguishant*, and has been varied, as indicated, to take account of Australian conditions. The modification is specified in Appendix ZZ.

The objective of this Standard is to provide the necessary technical data and requirements for IG-55 extinguishant to be used successfully and safely in a fire extinguishing system complying with AS ISO 14520.1.

As this Standard is reproduced from an International Standard, the following applies:

(a) Its number appears on the cover and title page while the international standard number appears only on the cover.

(b) In the source text ‘this International Standard’ should read ‘this Australian Standard’.

(c) A full point substitutes for a comma when referring to a decimal marker.

The full suite of AS ISO 14520 Standards consists of the following:

AS	
14520	Gaseous fire extinguishing systems—Physical properties
14520.1	Part 1: General requirements
14520.2	Part 2: CF_3I extinguishant
14520.5	Part 5: FK-5-1-12 extinguishant
14520.6	Part 6: HCFC Blend A extinguishant
14520.8	Part 8: HFC 125 extinguishant
14520.9	Part 9: HFC 227ea extinguishant
14520.10	Part 10: HFC 23 extinguishant
14520.11	Part 11: HFC 236fa extinguishant
14520.12	Part 12: IG-01 extinguishant
14520.13	Part 13: IG-100 extinguishant
14520.14	Part 14: IG-55 extinguishant
14520.15	Part 15: IG-541 extinguishant

Reference to the International Standard should be replaced by reference to the equivalent Australian Standard, as follows:

Reference to International Standard		*Australian Standard*	
ISO		AS ISO	
14520	Gaseous fire-extinguishing systems—Physical properties and system design	14520	Gaseous fire-extinguishing systems—Physical properties and system design
14520-1	Part 1: General requirements	14520.1	Part 1: General requirements

The term ‘normative’ has been used in this Standard to define the application of the appendix to which it applies. A ‘normative’ appendix is an integral part of a Standard.

AUSTRALIAN STANDARD

Gaseous fire-extinguishing systems—Physical properties and system design

Part 14:
IG-55 extinguishant (ISO 14520-14:2005, MOD)

1 Scope

This part of ISO 14520 gives specific requirements for gaseous fire-extinguishing systems, with respect to the IG-55 extinguishant. It includes details of physical properties, specification, usage and safety aspects and is applicable to systems operating at nominal pressures of 150 bar, 200 bar and 300 bar, at 15 °C. This does not preclude the use of other systems; however, design data for other pressures were not available at time of publication.

2 Normative references

The following referenced documents are indispensable for the application 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:— [1)], *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.

4 Characteristics and uses

4.1 General

Extinguishant IG-55 shall comply with the specification according to Table 1.

IG-55 is a colourless, odourless, electrically non-conductive gas with a density approximately the same as that of air. It is an inert gas mixture consisting nominally of 50 % argon and 50 % nitrogen with the following mixture specification.

a) Argon: range of (50 ± 5) %.

b) Nitrogen: range of (50 ± 5) %.

The physical properties are given in Table 2.

IG-55 extinguishes fires by a reduction of the oxygen concentration in the atmosphere of the hazard enclosure.

1) To be published. (Revision of ISO 14520-1:2000)