

NFPA[®]

408

Standard for Aircraft Hand Portable Fire Extinguishers

2017



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NFPA® 408

Standard for

Aircraft Hand Portable Fire Extinguishers

2017 Edition

This edition of NFPA 408, *Standard for Aircraft Hand Portable Fire Extinguishers*, was prepared by the Technical Committee on Portable Fire Extinguishers. It was issued by the Standards Council on July 19, 2016, with an effective date of August 8, 2016, and supersedes all previous editions.

This edition of NFPA 408 was approved as an American National Standard on August 8, 2016.

Origin and Development of NFPA 408

Work on NFPA 408 started in 1947 after requests were received by the National Fire Protection Association for recommendations on aircraft hand fire extinguishers. During the intervening years, prior to the adoption of the first draft of this text in 1955 by the Association, a number of proposals were prepared and circulated for comment and critique. In 1956, a revision was adopted incorporating an appendix on air crew training. Revisions were made in 1964, 1965, 1970, and 1973.

The 1984 document was completely revised to recognize state-of-the-art developments in extinguishing agents and to bring the document into conformance with the *Manual of Style for NFPA Technical Committee Documents*.

The 1989 edition was a reconfirmation of the 1984 edition. The 1994 edition was a partial revision. The 1999 edition was a reconfirmation of the 1994 edition.

Minimum requirements were added to the 2004 edition for halocarbon agent fire extinguishers because they had become acceptable for installation onboard aircraft, in lieu of halon extinguishers, per the U.S. Federal Aviation Administration (FAA).

In the 2010 edition, the technical committee enhanced crew and user safety by including requirements regarding the use of self-contained breathing apparatus (SCBA) and protective breathing equipment (PBE). The technical committee also addressed alternative extinguishing agents that could be used in training and onboard aircraft and still meet the set requirements. The requirements around the use and inclusion of halocarbons were reviewed extensively by the committee, and many changes were made to those requirements. The document also was updated for compliance with the *Manual of Style for NFPA Technical Committee Documents*.

In 2013, the Technical Committee on Aircraft Rescue and Fire Fighting voted to withdraw NFPA 408 as a standard. The committee argued that lack of adoption, as well as the limited amount of unique material pertaining to aircraft, had diminished the need for a standalone document. In response to public concern over the potential effects of withdrawal, NFPA 408 was not withdrawn, but responsibility for the document was transferred to the Technical Committee on Portable Fire Extinguishers.

The 2017 edition incorporates updated references and definitions. It also adds new support for water solution type hand fire extinguishers in accordance with the FAA's TSO C-19, "Portable Water Solution Type Hand Fire Extinguisher."

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NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

Committee Scope: This Committee shall have primary responsibility for documents on the installation, maintenance, and use of portable fire extinguishers and equipment. Does not apply to permanently installed fire extinguishing systems even though portions of those systems are portable, such as hose and nozzles, which may be attached to a fixed supply of extinguishing agent.

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NFPA 408**Standard for****Aircraft Hand Portable Fire Extinguishers**

2017 Edition

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NOTICE: An asterisk (*) following the number or letter designating a paragraph indicates that explanatory material on the paragraph can be found in Annex A.

A reference in brackets [] following a section or paragraph indicates material that has been extracted from another NFPA document. As an aid to the user, the complete title and edition of the source documents for extracts in mandatory sections of the document are given in Chapter 2 and those for extracts in informational sections are given in Annex B. Extracted text may be edited for consistency and style and may include the revision of internal paragraph references and other references as appropriate. Requests for interpretations or revisions of extracted text shall be sent to the technical committee responsible for the source document.

Information on referenced publications can be found in Chapter 2 and Annex B.

Chapter 1 Administration

1.1 Scope. This standard specifies requirements for the type, capacity, rating, number, location, installation, and maintenance of aircraft hand portable fire extinguishers to be provided for the use of flight crew members or other occupants of an aircraft for the control of incipient fires in the areas of aircraft that are accessible during flight.

1.1.1 This standard also includes requirements for training flight crew members in the use of these extinguishers.

1.1.2 This standard does not cover fire detection and fixed fire-extinguishing systems installed in an aircraft or fire detection and fire-extinguishing systems for the protection of ground maintenance operations.

1.1.3 Specific protection for Class D fires and for fires in hazardous materials is beyond the scope of this standard.

1.2 Purpose. This standard is intended for use by those responsible for selecting, purchasing, installing, approving, and maintaining aircraft hand portable fire extinguishers and for those responsible for training personnel in their use.

1.2.1* The specific requirements established in this standard are intended for the particular environment of an aircraft where fire extinguishment must be the first priority.

1.2.2* Hand portable fire extinguishers have the general purpose of serving as first-aid fire-fighting appliances.

1.2.3 The requirements of Chapters 7 and 8 of NFPA 10 are applicable to the aviation environment and are supplemental to the specific requirements of this standard.

Chapter 2 Referenced Publications

2.1 General. The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

2.2 NFPA Publication. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 10, *Standard for Portable Fire Extinguishers*, 2013 edition.

2.3 Other Publications.

2.3.1 FAA Publications. Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591.

DOT/FAA/AR-01/37, "Development of a Minimum Performance Standard for Hand-Held Fire Extinguishers as a Replacement for Halon 1211 on Civilian Transport Category Aircraft," August, 2002.

TSO C-19, "Portable Water Solution Type Hand Fire Extinguisher," February, 2009.

2.3.2 UL Publications. Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096

UL 1093, *Standard for Halogenated Agent Fire Extinguishers*, 1995, Revised 2008.

ANSI/UL 1803, *Standard for Factory Follow-Up on Third Party Certified Portable Fire Extinguishers*, 2012.

2.3.3 ULC Publications. Underwriters' Laboratories of Canada, 7 Underwriters Road, Toronto, Ontario M1R 3A9, Canada.

CAN/ULC-S512, *Standard for Halogenated Agent Hand and Wheeled Fire Extinguishers*, 2005, Reaffirmed 2007.

2.3.4 UL/ULC Publications. The following publications are binational harmonized standards for Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096, Underwriters' Laboratories of Canada, 7 Underwriters Road, Toronto, Ontario M1R 3A9, Canada.

ANSI/UL 8, CAN/ULC-S554, *Water Based Agent Fire Extinguishers*, 2011.

ANSI/UL 154, CAN/ULC-S503, *Standard for Carbon Dioxide Fire Extinguishers*, 2014.

ANSI/UL 299, CAN/ULC-S504, *Standard for Dry Chemical Fire Extinguishers*, 2012.