

NFPA® 1961

Standard on Fire Hose

2013 Edition



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NFPA® 1961

Standard on

Fire Hose

2013 Edition

This edition of NFPA 1961, *Standard on Fire Hose*, was prepared by the Technical Committee on Fire Hose. It was issued by the Standards Council on May 29, 2012, with an effective date of June 18, 2012, and supersedes all previous editions.

This edition of NFPA 1961 was approved as an American National Standard on June 18, 2012.

Origin and Development of NFPA 1961

Standards on fire hose for both industrial use and fire department use were among the earliest standards issued by NFPA, with the first standard issued in 1898. NFPA 196 was issued in 1934 as *Standard Specification for Cotton Rubber-Lined Fire Hose for Public and Private Fire Department Use*. That standard remained in existence until 1958, when the Fire Hose Committee was again constituted to update the requirements. A tentative standard was issued in 1958 and the official standard was issued in 1960 recognizing the newer synthetic materials that were being used in the manufacture of fire hose. The 1960 standard covered fire hose in the 1 in., 1½ in., 2 in., and 2½ in. sizes for single or multiple jacket hose and 3 in. and 3½ in. sizes for multiple jacket hose.

In the 1972 edition, the concept of single jacket relay supply hose in the trade sizes of 3 in., 4 in., 4½ in., 5 in., and 6 in. was introduced. In 1979 the standard was renumbered from NFPA 196 to NFPA 1961 to coincide with a general renumbering of the fire service standards. In the 1992 edition, the term “rack and reel hose” was changed to “occupant use hose,” the requirements for forestry hose were updated, and the requirements for suction hose were added. The 1997 edition was a reconfirmation of the 1992 edition.

The 2002 edition was completely revised to conform to the *Manual of Style for NFPA Technical Committee Documents*, to clean up ambiguous language, and to clarify the requirements. Procurement-related issues were deleted from the requirements of the document, and an equivalency statement and a formal retroactivity statement were added. The minimum trade size requirement was dropped for all but supply hose. The requirements for specific lengths were changed to only require a tolerance on the stated nominal length. Positive pressure requirements for hard suction hose were deleted.

A cold resistance test was added for all hose. Specific requirements were added to test the hose for abrasion resistance, heat resistance, water resistance, degradation from repeated bending, and degradation from alternating pressures. The flexibility and compressibility test method for forestry hose that had previously referenced USDA Forest Service specifications was stated in the standard. The chapter on inspection and tests was reorganized around four subject areas: quality control, inspection, testing, and certification.

The 2007 edition was a general update of the 2002 edition and clarified ambiguous requirements. The section for testing elongation, twist, warp, and rise was revised to clarify the four distinct tests. This edition also required all new fire hose to be marked with the country of origin.

The 2013 edition of NFPA 1961 requires that the maximum friction loss be within the requirements of ANSI/UL 19, *Lined Fire Hose and Hose Assemblies*. It also requires that hose be marked with the manufacturer's identification as well as the country of origin. This edition also allows the Authority Having Jurisdiction to request from the manufacturer that the service test pressure marked on the hose be lower than the actual service test pressure, but not less than the minimum requirements of Chapter 4. Minor editorial changes also were made throughout for clarification and ease of use.



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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 size and design of fire hose connections, and the performance, maintenance, and selection of all types of fire hose, couplings, nozzles, and accessory equipment.



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NFPA 1961

Standard on Fire Hose

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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.

Changes other than editorial are indicated by a vertical rule beside the paragraph, table, or figure in which the change occurred. These rules are included as an aid to the user in identifying changes from the previous edition. Where one or more complete paragraphs have been deleted, the deletion is indicated by a bullet (•) between the paragraphs that remain.

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

Chapter 1 Administration

1.1* Scope. This standard shall define the design and construction requirements for new fire hose, the testing required to verify the design and construction, and the inspection and testing required of all new fire hose.

1.2* Purpose. The purpose of this standard shall be to establish the minimum requirements for new fire hose.

1.3 Application. This standard shall apply to new attack hose, occupant use hose, forestry hose, supply hose, and suction hose.

1.4 Retroactivity. This standard shall not be applied retroactively.

1.5 Equivalency. Nothing in this standard is intended to prevent the use of systems, methods, or devices, of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety over those prescribed by this standard. Technical documentation shall be submitted to the authority having jurisdiction to demonstrate equivalency. The system, method, or device shall be approved for the intended purpose by the authority having jurisdiction.

1.6* Units. In this standard, inch-pound units for measurement are followed by an equivalent in metric units, but only the first stated value shall be regarded as the requirement.

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 Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 1962, *Standard for the Inspection, Care, and Use of Fire Hose, Couplings, and Nozzles and the Service Testing of Fire Hose*, 2008 edition.

2.3 Other Publications.

2.3.1 ASQ Publications. American Society for Quality, 600 North Plankinton Avenue, Milwaukee, WI 53203.

ASQ Z1.4, *Sampling Procedures and Tables for Inspection by Attributes*, 1993.

2.3.2 ASTM Publications. ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

ASTM D 380, *Standard Test Methods for Rubber Hose*, 1994.

ASTM D 412, *Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers — Tension*, 2002.

ASTM D 518, *Standard Test Method for Rubber Deterioration — Surface Cracking*, 1999.

ASTM D 573, *Standard Test Method for Rubber — Deterioration in an Air Oven*, 2004.

2.3.3 FM Publications. FM Global, 1301 Atwood Avenue, P.O. Box 7500, Johnston, RI 02919.

FM Class Number 2111, *Factory Mutual Approval Standard for Fire Hose*, 1999.

2.3.4 UL Publications. Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062.

ANSI/UL 19, *Lined Fire Hose and Hose Assemblies*, 2001, including revisions through June 30, 2008.

ANSI/UL 219, *Lined Fire Hose for Interior Standpipes*, 2006, including revisions through June 30, 2008.

2.3.5 USDA Publications. USDA Forest Service, San Dimas Technology and Development Center, San Dimas, CA 91773.

USDA Specification 5100-186D, *Forest Service Specification for Fire Hose, Cotton-Synthetic, Lined, Woven Jacket, 1 inch and 1½ inch*, October 1996.

2.3.6 Other Publications.

Merriam-Webster's Collegiate Dictionary, 11th edition, Merriam-Webster, Inc., Springfield, MA, 2003.

2.4 References for Extracts in Mandatory Sections. (Reserved)

Chapter 3 Definitions

3.1 General. The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not defined in this chapter or within another chapter, they shall be defined using their ordinarily accepted meanings within the context in which they are used. *Merriam-Webster's Collegiate Dictionary*, 11th edition, shall be the source for the ordinarily accepted meaning.

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the authority having jurisdiction.

