

NFPA® 703

Standard for Fire Retardant–Treated Wood and Fire-Retardant Coatings for Building Materials

2015 Edition



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An International Codes and Standards Organization

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NFPA® 703

Standard for

Fire Retardant–Treated Wood and Fire-Retardant Coatings for Building Materials

2015 Edition

This edition of NFPA 703, *Standard for Fire Retardant–Treated Wood and Fire-Retardant Coatings for Building Materials*, was prepared by the Technical Committee on Structures, Construction, and Materials and acted on by NFPA at its June Association Technical Meeting held June 9–12, 2014, in Las Vegas, NV. It was issued by the Standards Council on July 14, 2014, with an effective date of July 29, 2014, and supersedes all previous editions.

This edition of NFPA 703 was approved as an American National Standard on July 29, 2014.

Origin and Development of NFPA 703

In 1957, the Committee on Flameproofing and Preservative Treatments began to develop a standard for the flameproofing of wood. It soon became clear to the Committee that the fire retardant–coating industry was expanding considerably and that fire-retardant admixtures of plastics and other building materials required coverage in the standard. Thus, in its many subsequent meetings, the Committee reexamined its approach and expanded the standard to cover all fire-retardant treatments.

The standard was tentatively adopted at the 1960 Annual Meeting and was submitted for final adoption at the 1961 Annual Meeting.

The 1979 edition of NFPA 703, *Fire Retardant Impregnated Wood and Fire Retardant Coatings for Building Materials*, superseded the 1961 edition. The change in title was necessary to more adequately cover the subjects included in the text of the standard. The principal changes in the 1979 edition included improved definitions for fire-retardant coatings.

The 1985 edition included the addition of a new chapter that listed referenced publications whose use was mandated within the standard.

In the 1992 edition, the Committee provided clarification in several areas defining fire resistance. The 1995 edition was a reconfirmation with some editorial changes.

The 2000 edition reflected changes in the methods by which treated wood products are evaluated. Other changes were format driven to reflect the *Manual of Style for NFPA Technical Committee Documents*.

In the 2006 edition, technical modifications brought the document into agreement with the 2003/2006 editions of *NFPA 5000, Building Construction and Safety Code*, on the topic of fire retardant–treated wood. Additional changes were made to the format in compliance with the latest edition of the *Manual of Style for NFPA Technical Committee Documents*.

The changes in the 2009 edition were editorial in nature.

The 2012 edition clarified the use of common terms in the document, including the definition of *fire retardant–treated wood*.

The 2015 edition has revised the requirements for fire retardant–treated wood and updated referenced documents.

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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 protection of human life and property from fire and environmental loads through the selection and design of structural elements and assemblies; construction techniques and methodologies; and on the application of building materials used in the construction of buildings, structures, and related facilities.

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NFPA 703

Standard for

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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.

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

Chapter 1 Administration

1.1* Scope. This standard provides criteria for defining and identifying fire retardant-treated wood and fire retardant-coated building materials.

1.2 Purpose. (Reserved)

1.3 Application. (Reserved)

1.4 Retroactivity. Unless otherwise specified, the provisions of this standard shall not apply to facilities, equipment, structures, or installations that existed or were approved for construction or installation prior to the effective date of the standard. Where specified, the provisions of this standard shall be retroactive.

1.5 Equivalency.

1.5.1 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.

1.5.2 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.

1.6.1 SI Units. Metric units in this standard are in accordance with the modernized metric system known as the International System of Units (SI).

1.6.2 Primary and Equivalent Values. If a value for a measurement as given in this standard is followed by an equivalent value in other units, the first stated value shall be regarded as the requirement. A given equivalent value might be approximate.

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. (Reserved)

2.3 Other Publications.

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

ASTM D2898, *Standard Test Methods for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing*, 2010.

ASTM D3201, *Standard Test Method for Hygroscopic Properties of Fire-Retardant Wood and Wood-Based Products*, 2008a e1.

ASTM D5516, *Standard Test Method for Evaluating the Flexural Properties of Fire-Retardant Treated Softwood Plywood Exposed to Elevated Temperatures*, 2009.

ASTM D5664, *Standard Test Method for Evaluating the Effects of Fire-Retardant Treatments and Elevated Temperatures on Strength Properties of Fire-Retardant Treated Lumber*, 2010.

ASTM D6305, *Standard Practice for Calculating Bending Strength Design Adjustment Factors for Fire-Retardant-Treated Plywood Roof Sheathing*, 2008.

ASTM D6841, *Standard Practice for Calculating Design Value Treatment Adjustment Factors for Fire-Retardant-Treated Lumber*, 2008.

ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, 2012.

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

ANSI/UL 723, *Standard for Test for Surface Burning Characteristics of Building Materials*, 2008, Revised 2010.

2.3.3 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.

3.2.2* Authority Having Jurisdiction (AHJ). An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

3.2.3 Labeled. Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer



indicates compliance with appropriate standards or performance in a specified manner.

3.2.4* Listed. Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.

3.2.5 Shall. Indicates a mandatory requirement.

3.2.6 Should. Indicates a recommendation or that which is advised but not required.

3.2.7 Standard. A document, the main text of which contains only mandatory provisions using the word “shall” to indicate requirements and which is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Nonmandatory provisions are not to be considered a part of the requirements of a standard and shall be located in an appendix, annex, footnote, informational note, or other means as permitted in the *Manual of Style for NFPA Technical Committee Documents*.

3.3 General Definitions.

3.3.1 Fire-Retardant Coating. A coating that reduces the flame spread index of Douglas fir, and all other tested combustible surfaces to which it is applied, by at least 50 percent or to a flame spread index value of 75 or less, whichever is the lesser value, and has a smoke developed index not exceeding 200 when tested in accordance with ASTM E84 or ANSI/UL 723.

3.3.1.1 Class A Fire-Retardant Coating. A coating that reduces the flame spread index to 25 or less and that has a smoke developed index not exceeding 200 where applied to the applicable substrate, building material, or species of wood when tested in accordance with ASTM E84 or ANSI/UL 723.

3.3.1.2 Class B Fire-Retardant Coating. A coating that reduces the flame spread index to greater than 25 but not more than 75 and that has a smoke developed index not exceeding 200 where applied to the applicable substrate, building material, or species of wood when tested in accordance with ASTM E84 or ANSI/UL 723.

3.3.2 Fire Retardant-Treated Wood. A wood product impregnated with chemical by a pressure process or other means during manufacture, treated to exhibit reduced surface-burning characteristics and resist propagation of fire.

Chapter 4 Fire Retardant-Treated Wood

4.1 Application. These requirements shall apply to fire retardant-treated wood.

4.1.1 Fire Retardant-Treated Wood. Fire retardant-treated wood shall be a wood product impregnated with chemical by a pressure process or other means during manufacture meeting the requirements in 4.1.1.2 through 4.1.1.7.

4.1.1.1 Materials treated by means other than those specified in 4.1.1 shall be considered a fire retardant-coated material

and shall meet the requirements of fire-retardant coating in Chapter 5.

4.1.1.2 Fire retardant-treated wood shall be tested in accordance with ASTM E84 or ANSI/UL 723.

4.1.1.3 Fire retardant-treated wood shall have a listed flame spread index of 25 or less.

4.1.1.4 Fire retardant-treated wood shall not show evidence of significant progressive combustion when the test is continued for an additional 20-minute period.

4.1.1.5 The flame front shall not progress more than 10.5 ft (3.2 m) beyond the centerline of the burners at any time during the test.

4.1.1.6 For wood products produced by other means during manufacture other than a pressure process, all sides of the wood product shall be tested in accordance with and produce the results required in 4.1.1 through 4.1.1.5.

4.1.1.7 Wood structural panels shall be permitted to tested only on the front and back faces.

4.1.2 Fire Retardant-Treated Wood Treatment.

4.1.2.1 Pressure Process. For wood products impregnated with chemicals by a pressure process, the process shall be performed in closed vessels under gauge pressures not less than 50 psi (345 kPa). The treatment shall provide permanent protection to all surfaces of the wood product.

4.1.2.2 Other Means During Manufacture. For wood products produced by other means during manufacture, the treatment shall be an integral part of the manufacturing process of the wood product. The treatment shall provide permanent protection to all surfaces of the wood product.

4.2 Interior Applications. Interior fire retardant-treated wood shall have a moisture content of not over 28 percent when tested in accordance with the procedures of ASTM D 3201 at 92 percent relative humidity. Interior fire retardant-treated wood shall be tested in accordance with 4.2.1 or 4.2.2.

4.2.1 Wood Structural Panels. Adjustment to design values for wood structural panels shall be in accordance with the following:

- (1) The effect of the treatment, the method of redrying after treatment, and the exposure to high temperatures and high humidities on the flexure properties of fire retardant-treated softwood plywood shall be determined in accordance with ASTM D5516.
- (2) The test data developed by ASTM D5516 shall be used to develop adjustment factors or maximum loads and spans, or both, for untreated plywood design values in accordance with ASTM D6305.
- (3) Each manufacturer shall publish the allowable maximum loads and spans for service as floor and roof sheathing for their treatment.

4.2.2 Lumber. Adjustment to design values for lumber shall be in accordance with the following:

- (1) For each species of wood treated, the effect of the treatment, the method of redrying after treatment, and the exposure to high temperatures and high humidities on the allowable design properties of fire retardant-treated lumber shall be determined in accordance with ASTM D 5664.
- (2) The test data developed by ASTM D5664 shall be used to develop modification factors for use at or near room

temperature and at elevated temperatures and humidity in accordance with ASTM D6841.

- (3) Each manufacturer shall publish the modification factors for service at ambient temperatures of up to 100°F (37.8°C) and for service as roof framing.
- (4) The roof framing modification factors shall take into consideration the climatological location.

4.3 Exposure to Weather or Damp or Wet Locations. Where fire retardant-treated wood is exposed to weather or damp or wet locations, it shall be identified as “exterior” to indicate that there is no increase in the listed flame spread index when subjected to ASTM D2898 (Method A). (See 3.3.2, *Fire Retardant-Treated Wood*.)

4.4 Moisture Content.

4.4.1 Fire retardant-treated wood shall have a moisture content of 19 percent or less for lumber and 15 percent or less for wood structural panels before use.

4.4.2 For fire retardant-treated wood dried after treatment, the temperatures shall not exceed the temperatures used in drying the lumber and plywood submitted for the testing described in 4.2.1 or 4.2.2.

4.4.3 Fire retardant-treated wood that is air-dried after treatment (ADAT) shall be protected from the weather.

4.5 Labeling. Fire retardant-treated lumber and wood structural panels shall be labeled and listed with the following information:

- (1) Identification mark of an approved agency that lists materials in accordance with Chapter 3 (See 3.2.4, *Listed*.)
- (2) Identification of the treating manufacturer
- (3) Name of the fire-retardant treatment
- (4) Species of wood treated
- (5) End use of the product
- (6) Flame spread index and smoke developed index
- (7) Method of drying after treatment
- (8) Verification of conformance with appropriate standards in accordance with Sections 4.2 through 4.4
- (9) The words “No increase in the listed classification when subjected to the Standard Rain Test [ASTM D2898 (Method A)],” for fire retardant-treated wood exposed to weather or to damp or wet locations

Chapter 5 Fire-Retardant Coatings for Building Materials

5.1* Application. These requirements shall apply to fire-retardant paints and other surface coatings applied to building materials used for interior finish to reduce flame spread and smoke development.

5.2 General.

5.2.1* Fire-retardant coatings shall remain stable and adhere to the material under all atmospheric conditions to which the material is exposed.

5.2.2 A fire-retardant coating shall not be used for unprotected outdoor installations unless labeled for such installations.

5.2.3 The classification of fire-retardant coatings shall apply only when the coating is applied at the rates of coverage and to the applicable substrate, building material, or species of wood

indicated on the test report when the coating is applied in accordance with the manufacturer’s directions supplied with the container.

5.2.4 Fire-retardant coatings shall be applied in accordance with the manufacturer’s directions.

5.2.5 The application shall be certified by the applicator as being in conformance with the manufacturer’s directions for application.

5.2.6 A fire-retardant coating shall not be coated over with any material unless both the fire-retardant coating and the overcoat have been tested as a system and are found to meet the requirements of a fire-retardant coating.

5.3 Tests.

5.3.1* Fire-retardant coatings shall be tested in accordance with ASTM E84 or ANSI/UL 723.

5.3.2 Where fire-retardant coatings are to be subjected to sustained humidity of 80 percent or more or exposure to the weather, certification by a testing laboratory shall be required to indicate that there is no increase in listed classification when subjected to the “Standard Rain Test” described in ASTM D2898 (Method A).

5.4 Maintenance of Protection. Fire-retardant coatings shall possess the desired degree of permanency and shall be maintained to retain the effectiveness of the treatment under the service conditions encountered in actual use.

5.5 Labeled.

5.5.1 The fire retardant-coating material shall be listed and labeled to indicate conformance with the requirements in Sections 5.2 through 5.4.

5.5.2 The manufacturers’ instructions for application shall be affixed to each container of the fire retardant-coating material.

Annex A Explanatory Material

Annex A is not a part of the requirements of this NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.

A.1.1 Fire resistance ratings measured on an hourly basis are not covered in this standard. To establish such ratings, tests should be made in accordance with ASTM E119, *Standard Test Methods for Fire Tests of Building Construction and Materials*, or ANSI/UL 263, *Fire Tests of Building Construction and Materials*.

A.3.2.1 Approved. The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.



A.3.2.2 Authority Having Jurisdiction (AHJ). The phrase “authority having jurisdiction,” or its acronym AHJ, is used in NFPA documents in a broad manner, since jurisdictions and approval agencies vary, as do their responsibilities. Where public safety is primary, the authority having jurisdiction may be a federal, state, local, or other regional department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the authority having jurisdiction. In many circumstances, the property owner or his or her designated agent assumes the role of the authority having jurisdiction; at government installations, the commanding officer or departmental official may be the authority having jurisdiction.

A.3.2.4 Listed. The means for identifying listed equipment may vary for each organization concerned with product evaluation; some organizations do not recognize equipment as listed unless it is also labeled. The authority having jurisdiction should utilize the system employed by the listing organization to identify a listed product.

A.5.1 This section does not address the use of fire-retardant coatings as a thermal barrier.

A.5.2.1 Certain coatings might not be suitable for high-humidity occupancies or for other occupancies where combustible dust or oily residue deposits might accumulate, affecting the ability of the coating to adhere to the substrate material.

A.5.3.1 The flame spread index is expressed numerically on a scale for which the zero point is fixed by the performance of inorganic-reinforced cement board and the 100 point (approximately) is fixed by the performance of red oak flooring.

Annex B Informational References

B.1 Referenced Publications. The documents or portions thereof listed in this annex are referenced within the informational sections of this standard and are not part of the requirements of this document unless also listed in Chapter 2 for other reasons.

B.1.1 NFPA Publications. (Reserved)

B.1.2 Other Publications.

B.1.2.1 ASTM Publications. ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

ASTM E119, *Standard Test Methods for Fire Tests of Building Construction and Materials*, 2012a.

B.1.2.2 UL Publications. Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

ANSI/UL 263, *Fire Tests of Building Construction and Materials*, 2003, revised 2007.

B.2 Informational References. (Reserved)

B.3 References for Extracts in Informational Sections. (Reserved)

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Sequence of Events for the Standards Development Process

As soon as the current edition is published, a Standard is open for Public Input

Step 1: Input Stage

- Input accepted from the public or other committees for consideration to develop the First Draft
- Committee holds First Draft Meeting to revise Standard (23 weeks)
 - Committee(s) with Correlating Committee (10 weeks)
- Committee ballots on First Draft (12 weeks)
 - Committee(s) with Correlating Committee (11 weeks)
- Correlating Committee First Draft Meeting (9 weeks)
- Correlating Committee ballots on First Draft (5 weeks)
- First Draft Report posted

Step 2: Comment Stage

- Public Comments accepted on First Draft (10 weeks)
- If Standard does not receive Public Comments and the Committee does not wish to further revise the Standard, the Standard becomes a Consent Standard and is sent directly to the Standards Council for issuance
- Committee holds Second Draft Meeting (21 weeks)
 - Committee(s) with Correlating Committee (7 weeks)
- Committee ballots on Second Draft (11 weeks)
 - Committee(s) with Correlating Committee (10 weeks)
- Correlating Committee First Draft Meeting (9 weeks)
- Correlating Committee ballots on First Draft (8 weeks)
- Second Draft Report posted

Step 3: Association Technical Meeting

- Notice of Intent to Make a Motion (NITMAM) accepted (5 weeks)
- NITMAMs are reviewed and valid motions are certified for presentation at the Association Technical Meeting
- Consent Standard bypasses Association Technical Meeting and proceeds directly to the Standards Council for issuance
- NFPA membership meets each June at the Association Technical Meeting and acts on Standards with “Certified Amending Motions” (certified NITMAMs)
- Committee(s) and Panel(s) vote on any successful amendments to the Technical Committee Reports made by the NFPA membership at the Association Technical Meeting

Step 4: Council Appeals and Issuance of Standard

- Notification of intent to file an appeal to the Standards Council on Association action must be filed within 20 days of the Association Technical Meeting
- Standards Council decides, based on all evidence, whether or not to issue the Standards or to take other action

Committee Membership Classifications^{1,2,3,4}

The following classifications apply to Committee members and represent their principal interest in the activity of the Committee.

1. M *Manufacturer*: A representative of a maker or marketer of a product, assembly, or system, or portion thereof, that is affected by the standard.
2. U *User*: A representative of an entity that is subject to the provisions of the standard or that voluntarily uses the standard.
3. IM *Installer/Maintainer*: A representative of an entity that is in the business of installing or maintaining a product, assembly, or system affected by the standard.
4. L *Labor*: A labor representative or employee concerned with safety in the workplace.
5. RT *Applied Research/Testing Laboratory*: A representative of an independent testing laboratory or independent applied research organization that promulgates and/or enforces standards.
6. E *Enforcing Authority*: A representative of an agency or an organization that promulgates and/or enforces standards.
7. I *Insurance*: A representative of an insurance company, broker, agent, bureau, or inspection agency.
8. C *Consumer*: A person who is or represents the ultimate purchaser of a product, system, or service affected by the standard, but who is not included in (2).
9. SE *Special Expert*: A person not representing (1) through (8) and who has special expertise in the scope of the standard or portion thereof.

NOTE 1: “Standard” connotes code, standard, recommended practice, or guide.

NOTE 2: A representative includes an employee.

NOTE 3: While these classifications will be used by the Standards Council to achieve a balance for Technical Committees, the Standards Council may determine that new classifications of member or unique interests need representation in order to foster the best possible Committee deliberations on any project. In this connection, the Standards Council may make such appointments as it deems appropriate in the public interest, such as the classification of “Utilities” in the National Electrical Code Committee.

NOTE 4: Representatives of subsidiaries of any group are generally considered to have the same classification as the parent organization.

Submitting Public Input / Public Comment through the Electronic Submission System (e-Submission):

As soon as the current edition is published, a Standard is open for Public Input.

Before accessing the e-Submission System, you must first sign-in at www.NFPA.org. *Note: You will be asked to sign-in or create a free online account with NFPA before using this system:*

- a. Click in the gray Sign In box on the upper left side of the page. Once signed-in, you will see a red “Welcome” message in the top right corner.
- b. Under the Codes and Standards heading, Click on the Document Information pages (List of Codes & Standards), and then select your document from the list or use one of the search features in the upper right gray box.

OR

- a. Go directly to your specific document page by typing the convenient short link of www.nfpa.org/document#, (Example: NFPA 921 would be www.nfpa.org/921) Click in the gray Sign In box on the upper left side of the page. Once signed in, you will see a red “Welcome” message in the top right corner.

To begin your Public Input, select the link The next edition of this standard is now open for Public Input (formally “proposals”) located on the Document Information tab, the Next Edition tab, or the right-hand Navigation bar. Alternatively, the Next Edition tab includes a link to Submit Public Input online

At this point, the NFPA Standards Development Site will open showing details for the document you have selected. This “Document Home” page site includes an explanatory introduction, information on the current document phase and closing date, a left-hand navigation panel that includes useful links, a document Table of Contents, and icons at the top you can click for Help when using the site. The Help icons and navigation panel will be visible except when you are actually in the process of creating a Public Input.

Once the First Draft Report becomes available there is a Public comment period during which anyone may submit a Public Comment on the First Draft. Any objections or further related changes to the content of the First Draft must be submitted at the Comment stage.

To submit a Public Comment you may access the e-Submission System utilizing the same steps as previous explained for the submission of Public Input.

For further information on submitting public input and public comments, go to: <http://www.nfpa.org/publicinput>

Other Resources available on the Doc Info Pages

Document information tab: Research current and previous edition information on a Standard

Next edition tab: Follow the committee’s progress in the processing of a Standard in its next revision cycle.

Technical committee tab: View current committee member rosters or apply to a committee

Technical questions tab: For members and Public Sector Officials/AHJs to submit questions about codes and standards to NFPA staff. Our Technical Questions Service provides a convenient way to receive timely and consistent technical assistance when you need to know more about NFPA codes and standards relevant to your work. Responses are provided by NFPA staff on an informal basis.

Products/training tab: List of NFPA’s publications and training available for purchase.

Community tab: Information and discussions about a Standard