First Revision No. 1-NFPA 252-2020 [Global Input]

Remove "ANSI" from UL standards throughout the document.

Submitter Information Verification

Committee:

Submittal Date: Tue May 26 07:18:04 EDT 2020

Committee Statement

Committee Statement: Removal of repetitive wording and removal of ANSI because many years ago, UL preferred the ANSI/UL reference because there was a transition of traditional UL standards towards an ANSI standards development process.

Now, years later, a large majority of UL Standards are ANSI approved and follow the ANSI development and maintenance process. However, sometimes readers are confused because they don't understand the standards are UL standards, not developed by ANSI. There are many other references to standards promulgated by different standards development organizations where they are considered ANSI approved but do not include ANSI in the reference.

Response Message: FR-1-NFPA 252-2020

Public Input No. 3-NFPA 252-2019 [Global Input]

First Revision No. 2-NFPA 252-2020 [Section No. 2.3.1]

2.3.1 ASTM Publications.

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

ASTM E119, *Standard Test ~~Method~~ Methods for Fire Tests of Building Construction and Materials,* ~~2015~~ 2020 .

ASTM E2226, *Standard Practice for Application of Hose Stream,* 2015b (2019) .

Submitter Information Verification

Committee: FIZ-AAA

Submittal Date: Tue May 26 07:32:14 EDT 2020

Committee Statement

Committee Statement: date updates

Response Message: FR-2-NFPA 252-2020

Public Input No. 7-NFPA 252-2020 [Section No. 2.3.1]

First Revision No. 3-NFPA 252-2020 [Section No. 2.4]

2.4 References for Extracts in Mandatory Sections.

NFPA 80, *Standard for Fire Doors and Other Opening Protectives,* ~~2016~~ 2019 edition.

NFPA *101*®, *Life Safety Code*®, 2021 edition.

NFPA 221, *Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls,* 2021 edition.

Submitter Information Verification

Committee: FIZ-AAA
Submittal Date: Tue May 26 07:32:56 EDT 2020

Committee Statement

Committee Statement: Updates based on new sections.
Response Message: FR-3-NFPA 252-2020

First Revision No. 6-NFPA 252-2020 [Section No. 3.3]

3.3 General Definitions.

3.3.1 Door Assembly.

Any combination of a door, frame, hardware, and other accessories that is placed in an opening in a wall that is intended primarily for access or for human entrance or exit.

3.3.1.1 Fire Door Assembly.

Any combination of a fire door, a frame, hardware, and other accessories that together provide a specific degree of fire protection to the opening. [**80,**~~2016~~ 2019]

3.3.2* Fire Protection Rating.

The designation indicating the duration of the fire test exposure to which an opening protective assembly was exposed. [**221,** 2021]

A.3.3.2 Fire Protection Rating.

The acceptance criteria for determining fire protection ratings for fire door assemblies are described in this standard and those for fire window assemblies are described in NFPA 257 . Fire protection ratings are different from fire resistance ratings. See also Section B.4 .

3.3.3* Fire Resistance Rating.

The time, in minutes or hours, that materials or assemblies have withstood a fire exposure as determined by the tests, or methods based on tests, prescribed by NFPA *101* . [***101*** , 2021]

A.3.3.3 Fire Resistance Rating.

Fire resistance ratings are typically determined by testing to ASTM E119, *Standard Test Methods for Fire Tests of Building Construction and Materials.*

3.3.4 Opening.

A through-hole in the fire door assembly that can be seen from the unexposed side while looking through the plane of the assembly from a perpendicular position.

3.3.5 Vision Panel.

A glazing material installed in a fire door assembly to allow for viewing through the fire door assembly.

Submitter Information Verification

Committee: FIZ-AAA

Submittal Date: Tue May 26 07:42:14 EDT 2020

Committee Statement

Committee Statement: The output of this standard is a fire protection rating and it would be helpful to define it and also define fire resistance rating, which this standard does not determine (but which is mentioned in Annex B4). Also updated extracted definition references.

Response Message: FR-6-NFPA 252-2020

Public Input No. 10-NFPA 252-2020 [Section No. 3.3]

First Revision No. 11-NFPA 252-2020 [Section No. 4.2.1.4]

4.2.1.4

During the fire exposure, where the movement of the test sample causes the sample's distance to the end of the thermocouple assembly to vary, the end of the thermocouple assembly shall be reset to ~~6 in. (152 mm)~~ 152 mm (6 in.) at intervals not exceeding 10 minutes during the first 30 minutes of the test. Thereafter, the intervals shall be increased to not more than 30 minutes.

Submitter Information Verification

Committee: FIZ-AAA
Submittal Date: Tue Jul 14 08:33:25 EDT 2020

Committee Statement

Committee Statement: Editorial revision to switch SI and US units for consistency.
Response Message: FR-11-NFPA 252-2020

First Revision No. 7-NFPA 252-2020 [Section No. 4.3.4]

Global FR-1

4.3.4

Thermocouple pads shall meet the following requirements or otherwise shall be demonstrated to be equivalent by comparative tests in accordance with ASTM E119, *Standard Test ~~Method~~Methods for Fire Tests of Building Construction and Materials*, or ~~ANSI/~~UL 263, *Fire Tests of Building Construction and Materials*:

(1) Length and width, 152 mm ± 3.2 mm (6 in. ± ⅛ in.)

(2) Thickness, 10.2 mm ± 1.3 mm (~~0.04~~0.40 in. ± 0.05 in.)

(3) Thermal conductivity [at 65°C (150°F)], 0.55 ± 0.0039 W/m·K (0.38 ± 0.027 Btu·in./hr·ft^2·°F)

Submitter Information Verification

Committee: FIZ-AAA

Submittal Date: Tue May 26 07:48:24 EDT 2020

Committee Statement

Committee Statement: This proposal corrects the conversion of the thickness specification for the thermocouple pads when converting from the metric system to the US Customary Units. The correct thickness is as shown in the metric units. This can be confirmed through reference to a number of other hourly fire-resistance related standards from ASTM and UL.

Response Message: FR-7-NFPA 252-2020

Public Input No. 4-NFPA 252-2019 [Section No. 4.3.4]

First Revision No. 8-NFPA 252-2020 [Section No. 5.2.3]

5.2.3

Slide-type elevator doors shall be ~~permitted to be~~ mounted on the unexposed side of the opening in the test wall that encloses the furnace chamber.

Submitter Information Verification

Committee: FIZ-AAA

Submittal Date: Tue May 26 07:51:44 EDT 2020

Committee Statement

Committee Statement: This change is more direct and is proper code language.

Response Message: FR-8-NFPA 252-2020

Public Input No. 5-NFPA 252-2019 [Section No. 5.2.3]

First Revision No. 9-NFPA 252-2020 [Section No. B.3]

B.3 Historical Aspects.

The first effort to test fire doors was reported in a series of tests conducted in Germany in 1893 [11–13]. The British Fire Prevention Committee began testing in 1899 and produced a Standard Table of Fire Resisting Elements, including Fire Resisting Doors [1]. Underwriters Laboratories Inc. was involved in testing and listing fire doors shortly after 1900, using its own standards. In 1941, ASTM adopted ASTM E152, *Standard Methods of Fire Tests of Door Assemblies*, on fire door assembly tests. NFPA 252 was first issued by ~~the~~ NFPA in 1942. ASTM E152 was withdrawn by ASTM in 1995 and replaced by ASTM E2074, *Standard Test Method for Fire Tests of Door Assemblies, Including Positive Pressure Testing of Side-Hinged and Pivoted Swinging Door Assemblies* , which was, in turn, withdrawn in 2007 to avoid duplication with NFPA 252.

Submitter Information Verification

Committee: FIZ-AAA

Submittal Date: Tue May 26 07:54:25 EDT 2020

Committee Statement

Committee Statement: Updates to historical information.

Response Message: FR-9-NFPA 252-2020

Public Input No. 9-NFPA 252-2020 [Section No. B.3]

First Revision No. 5-NFPA 252-2020 [Section No. C.1.1]

C.1.1 NFPA Publications.

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

NFPA 80, *Standard for Fire Doors and Other Opening Protectives,* ~~2016~~ 2022 edition.

NFPA 257, *Standard on Fire Test for Window and Glass Block Assemblies,* 2022 edition.

Submitter Information Verification

Committee: FIZ-AAA

Submittal Date: Tue May 26 07:37:34 EDT 2020

Committee Statement

Committee Statement: Updates based on new sections.

Response Message: FR-5-NFPA 252-2020

First Revision No. 4-NFPA 252-2020 [Section No. C.1.2.1]

C.1.2.1 ASTM Publications.

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

ASTM E152, *Standard Methods of Fire Tests of Door Assemblies,* ~~1995~~ 1981 (withdrawn 1995, replaced by ASTM E2074) .

ASTM E119 , *Standard Test Methods for Fire Tests of Building Construction and Materials* , 2020.

ASTM E2074 , *Standard Test Method for Fire Tests of Door Assemblies, Including Positive Pressure Testing of Side-Hinged and Pivoted Swinging Door Assemblies* , 2000 e1 (withdrawn 2007 without replacement).

Submitter Information Verification

Committee: FIZ-AAA

Submittal Date: Tue May 26 07:34:11 EDT 2020

Committee Statement

Committee Statement: Updates based on new sections.

Response Message: FR-4-NFPA 252-2020

Public Input No. 8-NFPA 252-2020 [Section No. C.1.2.1]

First Revision No. 10-NFPA 252-2020 [Section No. C.2]

C.2 Informational References.

The following documents or portions thereof are listed here as informational resources only. They are not a part of the requirements of this document.

Babrauskas, V., and R. B. Williamson. “The Historical Basis of Fire Resistance Testing,” Part I and Part II, *Fire Technology,* Vol. 14, No. 5 and No. 6, August and November 1978, pp. 186–194, 306–316.

Bird, E. L., and S. J. Docking. *Fire in Buildings,* D. Van-Nostrand Co., Inc., New York, 1949.

Ferguson, R. S. “Principles of Fire Protection,” National Building Code of Canada Technical Paper No. 272, Division of Building Research, National Research Council of Canada, Ottawa, March 1970.

Fire Protection Handbook™, Nineteenth Edition, National Fire Protection Association, 2008.

Gordon, C. “Considerations of Life Safety and Building Use,” DBR Paper No. 699, Division of Building Research, National Research Council of Canada, Ottawa, January 1977.

Gross, D., and A. F. Robertson. “Experimental Fires in Enclosures,” Tenth Symposium (International) on Combustion, The Combustion Institute, 1965, pp. 931–942.

Gross, D. “Field Burnout Tests of Apartment Dwelling Units,” Building Science Series 10, U.S. Dept. of Commerce, National Bureau of Standards, September 29, 1967.

Harmathy, T. Z. “A New Look at Compartment Fires,” Part I and Part II, *Fire Technology,* Vol. 8, No. 3 and No. 4, August and November 1972, pp. 196–217, 326–351.

Harmathy, T. Z. “Designer's Option: Fire Resistance or Ventilation,” Technical Paper No. 436, Division of Building Research, National Research Council of Canada, Ottawa, NRCC 14746, 1974.

Harmathy, T. Z. “Design Approach to Fire Safety in Buildings,” *Progressive Architecture,* April 1974, pp. 84–87, National Research Council of Canada, Ottawa, NRCC 14076.

Harmathy, T. Z. “Design of Fire Test Furnaces,” *Fire Technology,* Vol. 5, No. 2, May 1969, pp. 146–150.

Harmathy, T. Z. “Performance of Building Elements in Spreading Fire,” DBR Paper No. 752, National Research Council of Canada, NRCC 16437, Fire Research, Vol. 1, 1977/1978, pp. 119–132.

Heselden, A. J. M. “Parameters Determining the Severity of Fire,” Symposium No. 2, Her Majesty's Stationery Office, 1968, London. Proceedings of the Symposium held at the Fire Research Station, Borehamwood, Herts (England), January 1967.

Ingberg, S. H., et al. “Combustible Contents in Buildings,” National Bureau of Standards BMS 149, July 1957.

Konicek, L., and T. T. Lie. “Temperature Tables for Ventilation Controlled Fires,” Building Research Note No. 94, National Research Council of Canada, September 1974.

Law, M. “Radiation from Fires in a Compartment,” Fire Research Technical Paper No. 20, Her Majesty's Stationery Office, London, 1968.

NFPA 80, *Standard for Fire Doors and Other Opening Protectives*, National Fire Protection Association, 2010.

NFPA 5000, *Building Construction and Safety Code*® National Fire Protection Association, 2012.

Odeen, K. “Theoretical Study of Fire Characteristics in Enclosed Spaces,” Bulletin No. 10, Royal Institute of Technology, Division of Building Construction, Stockholm, 1965.

Robertson, A. F., and D. Gross. “Fire Load, Fire Severity, and Fire Endurance,” Fire Test Performances, ASTM STP 464, American Society of Testing and Materials, 1970.

Ryan, J. E. “Assessment of Fire Hazards in Buildings,” Ignition, Heat Release, and Noncombustibility of Materials, ASTM STP 502, American Society of Testing and Materials, 1972.

Seigel, L. G. “Effects of Furnace Design on Fire Endurance Test Results,” Fire Test Performance, ASTM STP 464, American Society of Testing and Materials, 1970, pp. 56–67.

Seigel, L. G. “The Severity of Fires in Steel-Framed Buildings,” Symposium No. 2, Her Majesty's Stationery Office, 1968, London. Proceedings of the Symposium held at the Fire Research Station, Borehamwood, Herts (England), January 1967.

Stone, R. “Danger — Flammable,” *Wall Street Journal,* December 8, 1970.

Shorter, G. W. “The Fire Protection Engineer and Modern Building Design,” *Fire Technology,* Vol. 4, No. 3, August 1968, pp. 206–213.

Shoub, H., and D. Gross. “Doors as Barriers to Fire and Smoke,” Building Science Series 3, U.S. Dept. of Commerce, National Bureau of Standards, March 25, 1966.

Shoub, H. “Early History of Fire Endurance Testing in the United States,” Symposium on Fire Test

Methods, ASTM STP 301, American Society of Testing and Materials, 1961.

Submitter Information Verification

Committee: FIZ-AAA
Submittal Date: Tue Jun 23 09:49:45 EDT 2020

Committee Statement

Committee Statement: Update to boilerplate language.
Response Message: FR-10-NFPA 252-2020