

NFPA 256

Standard Methods of Fire Tests of Roof Coverings

2003 Edition



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An International Codes and Standards Organization

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NFPA 256

Standard

Methods of Fire Tests of Roof Coverings

2003 Edition

This edition of NFPA 256, *Standard Methods of Fire Tests of Roof Coverings*, was prepared by the Technical Committee on Fire Tests and acted on by NFPA at its May Association Technical Meeting held May 18–21, 2003, in Dallas, TX. It was issued by the Standards Council on July 18, 2003, with an effective date of August 7, 2003, and supersedes all previous editions.

This edition of NFPA 256 was approved as an American National Standard on July 18, 2003.

Origin and Development of NFPA 256

The test procedure covered by this standard was developed prior to 1920 by Underwriters Laboratories Inc. The test procedure was put in standard form by the E5 Committee on Fire Standards of the American Society for Testing and Materials (ASTM), adopted by ASTM as a tentative standard in 1955, and revised in 1956. It was adopted by the NFPA on May 22, 1958, on recommendation of the Committee on Fire Tests and was subsequently published as NFPA 256, in May 1958. It was adopted by ASTM as a standard later in 1958 and published by ASTM as E 108-58. It was also published by Underwriters Laboratories Inc., as No. 790, September 1958. Revised NFPA editions were published in 1964, 1970, 1976, 1981, and 1987. The 1993 edition of NFPA 256 was revised editorially to bring this document into conformance with its ASTM and UL counterparts.

The 1998 edition added a new Chapter 13, "Report of Results." This was done to clarify and to identify the required elements that relate to both specimen preparation and test results.

The 2003 edition is a reorganization for compliance with the NFPA *Manual of Style*, with no technical changes from the previous edition.

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Standard

Methods of Fire Tests of Roof Coverings

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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. These test methods shall measure the relative fire characteristics of roof coverings under a simulated fire originating outside a building.

1.2 Purpose. The tests shall be done to demonstrate the relative performance of materials under the test exposure involved.

1.3 Application. The test methods shall be applicable to roof coverings intended for installation on either combustible or noncombustible decks, when applied as intended for use.

1.3.1 Classes of Tests. Three classes of fire test exposure shall be described.

(A) **Class A.** Class A tests shall be applicable to roof coverings that are effective against severe test exposure, that afford a high degree of fire protection to the roof deck, that do not slip from position, and that do not present a flying brand hazard.

(B) **Class B.** Class B tests shall be applicable to roof coverings that are effective against moderate test exposure, that afford a moderate degree of fire protection to the roof deck, that do not slip from position, and that do not present a flying brand hazard.

(C) **Class C.** Class C tests shall be applicable to roof coverings that are effective against light test exposure, that afford a light degree of fire protection to the roof deck, that do not slip from position, and that do not present a flying brand hazard.

1.3.2 Test Limitations. These tests shall not be construed as having determined suitability for use after fire exposure.

1.4 Units and Formulas.

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

1.4.2 Primary Values. The SI value for a measurement and the equivalent inch-pound value given in parentheses shall each be acceptable for use as primary units for satisfying the 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 Publications. (Reserved)

2.3 Other Publications.

2.3.1 ASTM Publications. American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASTM D 225, *Standard Method for Steam Distillation of Bituminous Protective Coatings*, 2000.

ASTM D 3018, *Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules*, 2000.

2.3.2 UL Publication. Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062.

UL 55B, *Class C Asphalt Organic-Felt Sheet Roofing and Shingles*, 1983.

2.3.3 U.S. Government Publication. United States Department of Commerce, National Institute of Standards and Technology, Gaithersburg, MD 20899.

PS1, *Construction and Industrial Plywood*, 1995.

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 included, common usage of the terms shall apply.

3.2 NFPA Official Definitions.

3.2.1 Shall. Indicates a mandatory requirement.

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

3.2.3 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 shall be located in an appendix or annex, footnote, or fine-print note and are not to be considered a part of the requirements of a standard.

3.3 General Definitions. (Reserved)

Chapter 4 Equipment and General Test Procedures

4.1 Apparatus.

4.1.1* The essential elements of the fire test apparatus shall be configured as illustrated in Figure 4.1.1(a). These elements shall include a test roof deck, an adjustable frame [see Figure 4.1.1(b)] on which the test roof deck is mounted, a gas burner as a source of flame, a wind tunnel, an air velocity meter, a gas pressure gauge, a control valve, and an adjustable air supply.

4.1.2 The essential elements of the rain test apparatus shall be configured as illustrated in Figure 4.1.2.

4.2 Test Flame. Since control of the shape and size of the flame depends on minimizing air turbulence in the immediate vicinity of the apparatus, the conditions in 4.2.1 and 4.2.2 shall be met.