Designation: E 108 – 04

An American National Standard

Standard Test Methods for Fire Tests of Roof Coverings[1]

This standard is issued under the fixed designation E 108; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This fire-test-response standard covers the measurement of the relative fire characteristics of roof coverings under simulated fire originating outside the building. It is applicable to roof coverings intended for installation on either combustible or noncombustible decks when applied as intended for use. The following test methods are included:

1.1.1 Intermittent flame exposure test.

1.1.2 Spread of flame test.

1.1.3 Burning brand test.

1.1.4 Flying brand test.

1.1.5 Rain test.

1.2 Three classes of fire test exposure are described:

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

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

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

1.3 The values stated in inch-pound units shall be regarded as the standard. Values given in brackets are for information only.

1.4 *This standard is used to measure and describe the response of materials, products, or assemblies to heat and flame under controlled laboratory conditions, but does not by itself incorporate all factors required for fire hazard or fire risk assessment of the materials, products or assemblies under actual fire conditions.*

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

1.6 The text of this standard references notes and footnotes that provide explanatory information. These notes and footnotes, excluding those in tables and figures, shall not be considered as requirements of this standard.

2. Referenced Documents

2.1 *ASTM Standards:* [2]

D 225 Specification for Asphalt Shingles Surfaced with Mineral Granules

D 226 Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing

D 227 Specification for Coal-Tar Saturated Organic Felt Used in Roofing and Waterproofing

D 250 Specification for Asphalt-Saturated Asbestos Felt Used in Roofing and Waterproofing

D 312 Specification for Asphalt Used in Roofing

D 450 Specification for Coal-Tar Pitch Used in Roofing, Dampproofing, and Waterproofing

D 1227 Specification for Emulsified Asphalt Used as a Protective Coating for Roofing

D 2178 Specification for Asphalt Glass Felt Used in Roofing and Waterproofing

D 2626 Specification for Asphalt-Saturated and Coated Organic Felt Base Sheet Used in Roofing

D 2898 Test Methods for Accelerated Weathering of Fire-Retardant Treated Wood for Fire Testing

D 3018 Specification for Class A Asphalt Shingles Surfaced with Mineral Granules

D 3158 Specification for Asphalt Saturated and Coated Organic Felt Used in Roofing

D 3378 Specification for Asphalt-Saturated and Coated Asbestos Felt Used in Roofing

D 3462 Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules

D 4442 Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials

[1] These test methods are under the jurisdiction of ASTM Committee E05 on Fire Standards and are the direct responsibility of Subcommittee E05.11 on Fire Endurance.

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[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

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