Designation: E108 – 16

An American National Standard

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

This standard is issued under the fixed designation E108; 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 U.S. Department of Defense.

1. Scope*

1.1 This fire-test-response standard covers the measurement of the relative fire characteristics of roof coverings exposed to simulated fire sources originating outside the building. It is applicable to roof coverings intended for installation on either combustible or noncombustible roof 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 expected to be effective against severe fire exposure, afford a high degree of fire protection to the roof deck, do not slip from position, and are not expected to present a flying brand hazard.

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

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

1.3 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

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 Fire testing is inherently hazardous. Adequate safeguards for personnel and property shall be employed in conducting these tests.

1.7 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]

D225 Specification for Asphalt Shingles (Organic Felt) Surfaced With Mineral Granules (Withdrawn 2012)[3]

D226 Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing

D227 Specification for Coal-Tar-Saturated Organic Felt Used in Roofing and Waterproofing

D312 Specification for Asphalt Used in Roofing

D450 Specification for Coal-Tar Pitch Used in Roofing, Dampproofing, and Waterproofing

D1227 Specification for Emulsified Asphalt Used as a Protective Coating for Roofing

D2178 Specification for Asphalt Glass Felt Used in Roofing and Waterproofing

D2626 Specification for Asphalt-Saturated and Coated Organic Felt Base Sheet Used in Roofing

D2898 Practice for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing

D3018 Specification for Class A Asphalt Shingles Surfaced with Mineral Granules

[1] These test methods are under the jurisdiction of ASTM Committee E05 on Fire Standards and are the direct responsibility of Subcommittee E05.14 on External Fire Exposures.

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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.

[3] The last approved version of this historical standard is referenced on www.astm.org.

***A Summary of Changes section appears at the end of this standard**

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