



Standard Test Method for Flammability of Marine Surface Finishes¹

This standard is issued under the fixed designation E1317; 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.

1. Scope

1.1 This fire-test-response standard covers a procedure for measuring fire properties associated with flammable behavior of surface finishes used on noncombustible substrates aboard ship (**Note 1**). In particular, these include surface finishes intended for use in ship construction such as deck surfacing materials, bulkhead and ceiling veneers including any adhesives used to fasten the veneers to the bulkheads and ceilings, paints, and exposed treatment of insulating materials.

NOTE 1—This test method has been prepared to closely follow the test procedure of IMO Resolution A.653(16) (**1**).² Optional provisions not applicable to the domestic use of this test method have been deleted.

1.2 Tests performed according to this test method are intended to yield fire properties that, when appropriately interpreted, are potentially useful to select materials and surface treatments that will limit the rapid growth and spread of fire.

1.3 This test method requires a specific range of specimen radiant thermal exposure for measuring fire properties.

1.4 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.5 *This standard is used to measure and describe the response of materials, products, or assemblies to heat and flame under controlled 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.*

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

1.7 *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 appro-*

priate safety and health practices and determine the applicability of regulatory limitations prior to use. For specific hazard statements, see Section 7.

2. Referenced Documents

2.1 *ASTM Standards*:³

E84 Test Method for Surface Burning Characteristics of Building Materials

E162 Test Method for Surface Flammability of Materials Using a Radiant Heat Energy Source

E176 Terminology of Fire Standards

E648 Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source

E970 Test Method for Critical Radiant Flux of Exposed Attic Floor Insulation Using a Radiant Heat Energy Source

E1321 Test Method for Determining Material Ignition and Flame Spread Properties

2.2 *Code of Federal Regulations (CFR)*:⁴

CFR Title 46, Part 164.009, Noncombustible Materials

2.3 *ISO Standard*:⁵

ISO 5658-2 Reaction to fire tests – Spread of flame-Part 2: Lateral spread on building and transport products in vertical configuration

3. Terminology

3.1 *Definitions*—For definitions of general terms used in this test method, refer to Terminology **E176**.

3.2 *Definitions of Terms Specific to This Standard*:

3.2.1 *compensating thermocouple, n*—a thermocouple for the purpose of generating an electrical signal representing long-term changes in the stack metal temperatures wherein a fraction of the signal generated is subtracted from the signal developed by the stack-gas thermocouples.

3.2.2 *critical flux at extinguishment, n*—a flux level at the specimen surface corresponding to the distance of farthest

¹ This test method is under the jurisdiction of ASTM Committee **E05** on Fire Standards and is the direct responsibility of Subcommittee **E05.22** on Surface Burning.

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² The boldface numbers in parentheses refer to a list of references at the end of this standard.

³ 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.

⁴ Available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

⁵ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.