



# Standard Practice for Specimen Preparation and Mounting of Pipe and Duct Insulation Materials to Assess Surface Burning Characteristics<sup>1</sup>

This standard is issued under the fixed designation E2231; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This practice describes procedures for specimen preparation and mounting when testing pipe and duct insulation materials to assess flame spread and smoke development as surface burning characteristics using Test Method E84.

1.2 If the pipe or duct insulation materials to be tested are reflective insulation materials (see 3.2.10 and 3.2.11), the materials shall be tested using the procedures for specimen preparation and mounting described in Practice E2599 and not the procedures described in 6.1 through 6.6.

1.3 Testing is conducted with Test Method E84.

1.4 This practice does not provide pass/fail criteria that can be used as a regulatory tool.

1.5 Use the values stated in inch-pound units as the standard, in referee decisions. The values in the SI system of units are given in parentheses, for information only; see IEEE/ASTM SI-10 for further details.

1.6 This fire standard cannot be used to provide quantitative measures.

1.7 Fire testing of products and materials is inherently hazardous, and adequate safeguards for personnel and property shall be employed in conducting these tests. Fire testing involves hazardous materials, operations, and equipment. This standard gives instructions on specimen preparation and mounting, but the fire-test-response method is given in Test Method E84. See also Section 8.

1.8 The text of this standard references notes and footnotes which provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered requirements of the standard.

1.9 *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.*

1.10 This fire standard cannot be used to provide quantitative measures.

## 2. Referenced Documents

### 2.1 ASTM Standards:<sup>2</sup>

A390 Specification for Zinc-Coated (Galvanized) Steel Poultry Fence Fabric (Hexagonal and Straight Line)

C168 Terminology Relating to Thermal Insulation

C1136 Specification for Flexible, Low Permeance Vapor Retarders for Thermal Insulation

C1224 Specification for Reflective Insulation for Building Applications

C1396/C1396M Specification for Gypsum Board

E84 Test Method for Surface Burning Characteristics of Building Materials

E176 Terminology of Fire Standards

E2599 Practice for Specimen Preparation and Mounting of Reflective Insulation, Radiant Barrier and Vinyl Stretch Ceiling Materials for Building Applications to Assess Surface Burning Characteristics

IEEE/ASTM SI-10 International System of Units (SI) The Modernized Metric System

### 2.2 UL Standards:

UL 181 Standard for Safety for Factory-Made Air Ducts and Connectors<sup>3</sup>

## 3. Terminology

3.1 *Definitions*—For definitions of terms used in this practice refer to the terminology contained in Terminology E176.

3.2 *Definitions of Terms Specific to This Standard:*

<sup>1</sup> This practice 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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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> Available from Underwriters Laboratories (UL), Corporate Progress, 333 Pfingsten Rd., Northbrook, IL 60062.