



Designation: E3082 – 17

Standard Test Methods for Determining the Effectiveness of Fire Retardant Treatments for Natural Christmas Trees¹

This standard is issued under the fixed designation E3082; 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 provides a two-step testing process for determining the effectiveness of surface applied treatments for natural Christmas trees to improve fire test response.

1.2 The purpose of these test methods is to:

1.2.1 Utilize a detached branch test (Method 1) to screen potential surface-applied fire retardant products and to determine their effectiveness in limiting the spread of flame and the continuation of flaming by comparing the burning characteristics of treated and untreated small Christmas tree branches subjected to a small open Bunsen-burner type flame ignition source, and

1.2.2 Use whole natural Christmas trees (Method 2) to determine the effectiveness of surface applied fire retardants found to be effective in the detached branch test (Method 1) through comparison of heat release rate contribution of treated trees as compared to untreated trees when subjected to an open flame ignition source.

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 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.*

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

1.6 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 as requirements of the standard.

¹ These test methods are under the jurisdiction of ASTM Committee E05 on Fire Standards and are the direct responsibility of Subcommittee E05.15 on Furnishings and Contents.

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1.7 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

E176 Terminology of Fire Standards

D1835 Specification for Liquefied Petroleum (LP) Gases

D5025 Specification for Laboratory Burner Used for Small-Scale Burning Tests on Plastic Materials

E2067 Practice for Full-Scale Oxygen Consumption Calorimetry Fire Tests

2.2 California Regulations:³

California Code of Regulations, Title 19, Chapter 8, Article 3 Registration and Labeling of Chemicals

2.3 NFPA Standards:⁴

NFPA 1 Fire Code

NFPA 289 Standard Method of Fire Test for Individual Fuel Packages

2.4 UL Standards:⁵

UL 1975 Standard for Fire Tests for Foamed Plastics Used for Decorative Purposes

UL 2358 Outline for Fire Tests of Pre-lit Artificial Seasonal Use Tress and Other Seasonal Decorative Items

2.5 Gas Processors Association Standard:⁶

GPA 2140 Liquefied Petroleum Gas Specifications and Test Method

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 Available from State of California Department of Industrial Relations.

⁴ Available from National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02169-7471, <http://www.nfpa.org>.

⁵ Available from Underwriters Laboratories (UL), 2600 N.W. Lake Rd., Camas, WA 98607-8542, <http://www.ul.com>.

⁶ Available from Gas Processors Association (GPA), 66 American Plaza, Suite 700, Tulsa, OK 74135, <http://www.gpaglobal.org>.