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An American National Standard

Standard Guide for Fire-Resistance Experiments[1]

This standard is issued under the fixed designation E2748; 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.

INTRODUCTION

This guide provides a means for ensuring comparability of findings among different researchers conducting fire-resistance experiments employing innovative and creative variations to standard test methods. This guide is intended to bring uniformity and consistency to tests and reports covering fire-resistance research that is generally conducted as a variation of Test Methods E119. Its provisions are voluntary and users are free to pick and choose from the provisions herein provided. The overriding goal is to make it possible to begin to provide data that ultimately can be used in fire safety engineering and fire-resistance modeling as those fields evolve. When the purpose of the research is to study the effect of changing specific individual variables on the outcome of Test Methods E119 fire-resistance tests, sound research practices dictate that only one variable should be changed at a time.

1. Scope

1.1 This guide covers the conduct of fire-resistance tests using conditions different than those addressed in Test Methods E119. This guide also addresses the reporting of data derived from those tests.

1.2 This guide does not provide or generate fire-resistance ratings suitable for determining compliance with code or regulatory requirements comparable to those resulting from tests conducted in accordance with Test Methods E119.

1.3 The values stated in SI units are to be regarded as standard. The values in parentheses are for information only.

1.4 *This guide 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.*

1.5 *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.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

E119 Test Methods for Fire Tests of Building Construction and Materials

E176 Terminology of Fire Standards

E603 Guide for Room Fire Experiments

E1529 Test Methods for Determining Effects of Large Hydrocarbon Pool Fires on Structural Members and Assemblies

2.2 *Other Standards:*

ISO 834-1 Fire Resistance Tests – Elements of Building Construction – Part 1: General Requirements[3]

NFPA 251 Standard Methods of Tests of Fire Resistance of Building Construction and Materials[4]

3. Terminology

3.1 For definitions of terms used in this guide, refer to Terminology E176.

[1] This guide is under the jurisdiction of ASTM Committee E05 on Fire Standards and is the direct responsibility of Subcommittee E05.11 on Fire Resistance.

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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] Available from International Organization for Standardization, P.O. Box 56, CH-1211, Geneva 20, Switzerland.

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