



Standard Guide for Development of Fire-Risk-Assessment Standards¹

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1. Scope

1.1 This guide covers the development of fire-risk-assessment standards.

1.2 This guide is directed toward development of standards that will provide procedures for assessing fire risks harmful to people, property, or the environment.

2. Referenced Documents

2.1 ASTM Standards:

E 176 Terminology of Fire Standards²

E 603 Guide for Room Fire Experiments²

E 1546 Guide for Development of Fire-Hazard-Assessment Standards²

2.2 Other ASTM Documents:

*Form and Style for ASTM Standards*³

3. Terminology

3.1 *Definitions*—See Terminology E 176.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *fire-test-response-characteristic index, n*—a single quantitative measure that combines two or more fire-test-response characteristics for a material, product, or assembly, all developed under test conditions compatible with a common fire scenario, addressing collectively the corresponding threat. See also *fire-test-response-characteristic profile*, *fire hazard*, *fire risk*, *fire-test-response characteristic*.

3.2.2 *fire-test-response-characteristic profile, n*—array of fire-test-response characteristics for a material, product, or assembly, all developed under test conditions compatible with a common fire scenario, addressing collectively the corresponding threat. See also *fire hazard*, *fire risk*, *fire-test-response characteristic*.

4. Significance and Use

4.1 This guide is intended for use by those undertaking the development of fire-risk-assessment standards. Such standards are expected to be useful to manufacturers, architects, specification writers, and authorities having jurisdiction.

4.2 As a guide, this document provides information on an approach to the development of a fire-risk-assessment stan-

dard; fixed procedures are not established. Limitations of data, available tests and models, and scientific knowledge may constitute significant constraints on the fire-risk-assessment procedure and associated standard.

4.3 While the focus of this guide is on developing fire-risk-assessment standards for products, the general concepts presented also may apply to processes, activities, occupancies, and buildings.

5. Key Elements

5.1 This guide uses as its key elements the following:

5.1.1 The purpose of a fire-risk-assessment standard is to provide a standardized procedure for assembling a compilation of information relevant to the fire risk of a product under specific conditions of use.

5.1.2 The information assembled should be relevant to the purpose of assessing the fire risk of the specific designated product within the range of all relevant fire scenarios.

5.1.3 The information assembled should be explicit and quantitative. It should provide a sufficiently thorough examination of the product's fire risk under the conditions defined by the scope of the specific standard so as to permit valid choices and decisions with respect to the fire risk of that product.

5.1.4 A persuasive scientific case must be made in the documentation of a specific fire-risk-assessment standard that the procedures, data, and risk measures specified by the standard will address questions about a product's fire risk with sufficient accuracy and validity that a more thorough assessment procedure would not materially alter any decisions that might be made based on the standard. If such a case cannot be made for all products to be addressed, then the risk assessment should specify those conditions under which a more thorough fire-risk-assessment procedure should be used.

5.1.5 The absence of a data source, test method, or calculation procedure of sufficient scope and proven validity to support the needs of a particular fire-risk-assessment procedure may not be a sufficient reason to use a data source, test method, or calculation procedure of lesser scope or unproven validity. It is recognized that fire-risk assessments of such products may need to be performed in any event, using relevant nonstandardized procedures. When such nonstandardized or unvalidated procedures are used, the details shall be included to such an extent that the procedures become standardized only for use within the specified fire-risk-assessment procedure through final publication of the fire-risk-assessment standard document.

¹ This guide is under the jurisdiction of ASTM Committee E-5 on Fire Standards and is the direct responsibility of Subcommittee E05.33 on Fire Safety Engineering. Current edition approved Feb. 10, 1996. Published April 1996.

² *Annual Book of ASTM Standards*, Vol 04.07.

³ Available from ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428.