



Designation: D5425 – 18

Standard Guide for Development of Fire Hazard Assessment Standards of Electrotechnical Products¹

This standard is issued under the fixed designation D5425; 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 guide provides guidance on the development of fire hazard assessment standards for electrotechnical products. For the purposes of this guide, products include materials, components, and end-use products.

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

1.3 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *This fire standard cannot be used to provide quantitative measures.*

1.5 *This standard is used to predict or provide a quantitative measure of the fire hazard from a specified set of fire conditions involving specific materials, products, or assemblies. This assessment does not necessarily predict the hazard of actual fires which involve conditions other than those assumed in the analysis.*

1.6 *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

E1711 Terminology Relating to Electrical Insulation

E176 Terminology of Fire Standards

E603 Guide for Room Fire Experiments

E1546 Guide for Development of Fire-Hazard-Assessment Standards

E1776 Guide for Development of Fire-Risk-Assessment Standards

E2061 Guide for Fire Hazard Assessment of Rail Transportation Vehicles

E2067 Practice for Full-Scale Oxygen Consumption Calorimetry Fire Tests

2.2 NFPA Codes and Standards:³

NFPA 555 Guide on Methods for Decreasing the Probability of Flashover (Withdrawn)

NFPA 556 Guide on Methods for Evaluating Fire Hazard to Occupants of Passenger Road Vehicles

NFPA 901 Uniform Coding for Fire Protection

2.3 International Electrotechnical Commission (IEC) Standards:⁴

IEC 60695-1-1 Fire Hazard Testing—Part 1-1: Guidance for Assessing the Fire Hazard of Electrotechnical Products—General guidelines (Withdrawn)

2.4 International Organization for Standardization (ISO) Standards:⁵

ISO 13943 Fire Safety: Vocabulary

3. Terminology

3.1 Definitions:

3.1.1 For definitions of terms used in this guide and associated with electrical and electronic insulating materials, use Terminology **D1711**.

3.1.2 For definitions of terms used in this guide and associated with fire issues, use Terminology **E176**, ISO 13943, and IEC 60695-1-1 (see 5.1). Where differences exist in definitions, the definitions contained in Terminology **E176** shall prevail.

3.2 Definitions of Terms Specific to This Standard:

¹ This guide is under the jurisdiction of ASTM Committee **D09** on Electrical and Electronic Insulating Materials and is the direct responsibility of Subcommittee **D09.17** on Fire and Thermal Properties.

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

⁴ Available from International Electrotechnical Commission (IEC), 3 Rue de Varembe, Case postale 131, CH-1211, Geneva 20, Switzerland, <http://www.iec.ch>.

⁵ Available from International Organization for Standardization, P.O. Box 56, CH-1211, Geneva 20, Switzerland or from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

*A Summary of Changes section appears at the end of this standard