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An American National Standard

Standard Terminology of Fire Standards[1]

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1. Scope

1.1 This terminology covers terms, related definitions, and descriptions of terms used or likely to be used in fire-test-response standards, fire-hazard-assessment standards, and fire-risk-assessment standards. Definitions of terms are special-purpose definitions that are consistent with the standard definitions but are written to ensure that a specific fire-test-response standard, fire-hazard-assessment standard, or fire-risk-assessment standard is properly understood and precisely interpreted.

NOTE 1—For additional information, refer to ASTM Policy on Fire Standards.[2]

2. Referenced Documents

2.1 *ASTM Standards:* [3]

D 3286 Test Method for Gross Calorific Value of Coal and Coke by the Isoperibol Bomb Calorimeter

E 84 Test Method for Surface Burning Characteristics of Building Materials

E 136 Test Method for Behavior of Materials in a Vertical Tube Furace at 750°C

E 119 Test Methods for Fire Tests of Building Construction and Materials

E 152 Methods of Fire Tests of Door Assemblies

E 163 Method for Fire Tests of Window Assemblies

E 648 Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source

E 800 Guide for Measurement of Gases Present or Generated During Fires

E 814 Test Method for Fire Tests of Through-Penetration Fire Stops

E 906 Test Method for Heat and Visible Smoke Release Rates for Materials and Products

E 970 Test Method for Critical Radiant Flux of Exposed Attic Floor Insulation Using a Radiant Heat Energy Source

E 1317 Test Method for Flammability of Marine Surface Finishes

E 1321 Test Method for Determining Material Ignition and Flame Spread Properties

E 1352 Test Method for Cigarette Ignition Resistance of Mock-Up Upholstered Furniture Assemblies

E 1353 Test Method for Cigarette Ignition Resistance of Components of Upholstered Furniture

E 1354 Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter

E 1474 Test Method for Determining the Heat Release Rate of Upholstered Furniture and Mattress Components or Composites Using a Bench Scale Oxygen Consumption Calorimeter

E 1529 Test Method for Determining Effects of Large Hydrocarbon Pool Fires on Structural Members and Assemblies

E 1537 Test Method for Fire Testing of Upholstered Furniture Items

E 1590 Test Method for Fire Testing of Mattresses

E 1623 Test Method for Determination of Fire and Thermal Parameters of Materials, Products, and Systems Using an Intermediate Scale Calorimeter (ICAL)

E 1678 Test Method for Measuring Smoke Toxicity for Use in Fire Hazard Analyses

E 1725 Test Method for Fire Tests of Fire Resistive Barrier Systems for Electrical System Components

E 1776 Guide for Development of Fire-Risk-Assessment Standards

E 1822 Test Method for Fire Testing of Stacked Chairs

2.2 *ISO Standards*[4]*:*

ISO 1182, Fire Tests-Building Materials-Non-Combustibility Test

ISO 13943, Fire Safety-Vocabulary

3. Significance and Use

3.1 *Definitions*—Terms and related definitions given in Section 4 are intended for use uniformly and consistently in all

[1] This terminology is under the jurisdiction of ASTM Committee E05 on Fire Standards and is the responsibility of Subcommittee E05.31 on Terminology and Editorial.

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[2] Available from ASTM Headquarters, 100 Barr Harbor Drive, West Conshohocken, PA 19428.

[3] 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.

[4] Available from International Standardization Organization, ISO Central Secretariat 1, rue de Varembé, Case postale 56, CH-1211, Geneva 20, Switzerland or American National Standards Institute, 11 West 42nd Street, New York, NY, 10046.

fire test standards and in all fire-test-response standards, fire-hazard-assessment standards, and fire-risk-assessment standards in which they appear.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 As indicated in Section 4, terms and their definitions are intended to provide a precise understanding and interpretation of fire-test-response standards, fire-hazard-assessment standards, and fire-risk-assessment standards in which they appear.

3.2.2 A specific definition of a given term is applicable to the standard or standards in which the term is described and used.

3.2.3 Different definitions of the same term, appearing respectively in two or more standards, are acceptable provided each one is consistent with and not in conflict with the standard definition for the same term, that is, concept.

3.2.4 Each standard in which a term is used in a manner specially defined (see 1.1 and Section 5) should list the term and its description under the subheading, Definitions of Terms.

3.3 Definitions for some terms associated with fire issues and not included in Terminology E 176 can be found in ISO 13943. When discrepancies exist, the definition in Terminology E 176 shall prevail.

4. Terminology

4.1 Terms and their standard definitions within the scope of this standard are given in Section 4 in alphabetical order. Annex A1 contains the definitions of terms that are included in other fire standards.

4.2 Discussions associated with definitions are printed directly under the appropriate definition. The date following each definition or discussion indicates the year of introduction or of latest revision of that particular definition or discussion.

afterglow, *n*—emission of light, usually subsiding, from a material undergoing combustion, but occurring after flaming has ceased. (1986)[5]

assembly, *n*—a unit or structure composed of a combination of materials or products, or both. (1990)

burn, *v*—to undergo combustion. (1989)

char, *v*—to form carbonaceous residue during pyrolysis or during incomplete combustion. (1979)

char, *n*—a carbonaceous residue formed by pyrolysis or incomplete combustion. (1979)

chimney effect—upward thrust of smoke and hot gases by convection currents confined in a vertical enclosure. (1999)

combustible, *adj*—capable of undergoing combustion. (1985)

DISCUSSION—The term combustible is often delimited to specific fire-exposure conditions. For example, building materials are considered combustible if they are capable of undergoing combustion in air at pressures and temperatures that might occur during a fire in a building. Similarly, some materials that are not combustible under such conditions may be combustible when exposed to higher temperatures and pressures or to an oxygen-enriched environment. Materials that are not combustible in bulk form may be combustible in finely divided form. (1985)

combustion, *n*—a chemical process of oxidation that occurs at a rate fast enough to produce temperature rise and usually light either as a glow or flame. (See also **glow** and **smoldering.**) (1989)

combustion products, *n*—effluent produced when a material undergoes combustion (see also **smoke**; see also **combustion**). (2001)

DISCUSSION—The combustion process releases effluents that have mass, in gaseous, liquid, or solid form, and generates radiant energy, as heat or light, and sometimes sound. However, the common usage of the term *combustion products* in ASTM E05 standards is only for those which have mass. (2001)

composite material, *n*—structured combination of two or more discrete materials. (1997)

effective heat of combustion, *n*—the amount of heat generated per unit mass lost by a material, product or assembly, when exposed to specific fire test conditions (contrast **gross heat of combustion)** (2003).

DISCUSSION—The effective heat of combustion depends on the test method and is determined by dividing the measured heat release by the mass loss during a specified period of time under the specified test conditions. Typically, the specified fire test conditions are provided by the specifications of the fire test standard that cites effective heat of combustion as a quantity to be measured. For certain fire test conditions, involving very high heat and high oxygen concentrations under high pressure, the effective heat of combustion will approximate the gross heat of combustion. More often, the fire test conditions will represent or approximate certain real fire exposure conditions, and the effective heat of combustion is the appropriate measure. Typical units are kJ/g or MJ/kg. (2001)

environment, *n—as related to fire,* the conditions and surroundings that may influence the behavior of a material, product, or assembly when it is exposed to ignition sources or fire. (1989)

fire, *n*—destructive burning as manifested by any or all of the following: light, flame, heat, smoke. (1988)

fire-characteristic profile, *n*—an array of fire-test-response characteristics, all measured using tests relevant to the same fire scenario, for a material, product, or assembly to address, collectively, the corresponding fire hazard. (See also **fire hazard, fire risk,** and **fire-test-response characteristic.**) (1993)

DISCUSSION—An array of fire-test-response characteristics in a set of data relevant to the assessment of fire hazard in a particular fire scenario. In other words, all the fire tests used would have a demonstrated validity for the fire scenario in question, for example by having comparable fire intensities. The fire-characteristic profile is intended as a collective guide to the potential fire hazard from a material, product, or assembly involved in a fire that could be represented by the laboratory test conditions. (1993)

fire endurance, *n*—a measure of the elapsed time during which a material or assemblage continues to exhibit fire resistance. (1986)

DISCUSSION—As applied to elements of buildings, it shall be measured by the methods and to the criteria defined in Test Methods E 119, E 152, E 163, or E 814.

fire exposure, *n*—process by which or extent to which humans, animals, materials, products, or assemblies are

[5] Date indicates year of introduction or latest review or revision.

subjected to the conditions created by fire. (1991)

fire gases, *n*—the airborne products emitted by a material, product, or assembly undergoing pyrolysis or combustion, that exist in the gas phase at the relevant temperature. (1979)

fire hazard, *n*—the potential for harm associated with fire. (1989)

DISCUSSION—A fire may pose one or more types of hazard to people, animals, or property. These hazards are associated with the environment and with a number of fire-test-response characteristics of materials, products, or assemblies including but not limited to ease of ignition, flame spread, rate of heat release, smoke generation and obscuration, toxicity of combustion products, and ease of extinguishment. (1989)

fire model, *n*—a physical representation or set of mathematical equations that approximately simulate the dynamics of burning and associated processes. (1992)

fire performance, *n*—response of a material, product, or assembly in a particular fire, other than in a fire test involving controlled conditions (different from **fire-test-response characteristic**). (1993)

DISCUSSION—The ASTM Policy on Fire Standards distinguishes between the response of materials, products, or assemblies to heat and flame under controlled conditions, which is fire-test-response characteristic, and under actual fire conditions, which is fire performance. Fire performance depends on the occasion or environment and may not be measurable. In view of the limited availability of fire-performance data, the response to one or more fire tests, appropriately recognized as representing end-use conditions, is generally used as a predictor of the fire performance of a material, product, or assembly. (1993)

fire performance characteristic, *n*—this term is deprecated. (See **fire-test-response characteristic** and **fire performance** (q.v.).) (1990)

fire performance test, *n*—this term is deprecated. (See **fire-test-response characteristic** and **fire performance** (q.v.).) (1990).

fireproof, adj—an inappropriate and misleading term. Do not use. (See commentary in X1.2.)

DISCUSSION—This term was originally used to describe buildings having all noncombustible structural elements and some degree of fire resistance. However, the term has been misunderstood to mean an absolute or unconditional property, and therefore the use of the term, fireproof, is inappropriate and misleading. (1990)

fire resistance, *n*—the property of a material or assemblage to withstand fire or give protection from it. (1986)

DISCUSSION—As applied to elements of buildings, it is characterized by the ability to confine a fire or to continue to perform a given structural function, or both.

fire resistant, adj—See **fire resistive**, the preferred term. (1983)

fire resistive, *adj*—having fire resistance (TCG-01). (1983)

fire retardant, n—a deprecated term. Do not use. (1986)

fire retardant, adj—not a defined term. Use as a modifier only with defined compound terms: **fire-retardant barrier, fire-retardant chemical, fire-retardant coating,** and **fire-retardant treatment.** (1986)

fire-retardant barrier, *n*—a layer of material which, when secured to a combustible material or otherwise interposed between the material and a potential fire source, delays ignition and combustion of the material when the barrier is exposed to fire. (1986)

fire-retardant chemical, *n*—a chemical, which when added to a combustible material, delays ignition and combustion of the resulting material when exposed to fire. (1986)

DISCUSSION—A fire-retardant chemical can be a part of the molecular structure, an admixture, or an impregnant.

fire-retardant coating, *n*—a fluid-applied surface covering on a combustible material which delays ignition and combustion of the material when the coating is exposed to fire. (See also **flame-retardant coating.** Compare **fire-retardant barrier.**) (1986)

fire-retardant treatment, *n*—the use of a fire-retardant chemical or a fire-retardant coating. (See also **flame-retardant treatment.**) (1986)

fire risk, *n*—an estimation of expected fire loss that combines the potential for harm in various fire scenarios that can occur with the probabilities of occurrence of those scenarios. (1993)

DISCUSSION—Risk may be defined as the probability of having a certain type of fire, where the type of fire may be defined in whole or in part by the degree of potential harm associated with it, or as potential for harm weighted by associated probabilities. However it is defined, no risk scale implies a single value of acceptable risk. Different individuals presented with the same risk situation may have different opinions on its acceptability. (1993)

fire scenario, *n*—a detailed description of conditions, including environmental, of one or more of the stages from before ignition to the completion of combustion in an actual fire, or in a full scale simulation. (1998)

DISCUSSION—The conditions describing a fire scenario, or a group of fire scenarios, are those required for the testing, analysis, or assessment that is of interest. Typically they are those conditions that can create significant variation in the results. The degree of detail necessary will depend upon the intended use of the fire scenario. Environmental conditions may be included in a scenario definition but are not required in all cases. Fire scenarios often define conditions in the early stages of a fire while allowing analysis to calculate conditions in later stages. (1998)

fire test exposure severity, *n*—a measure of the degree of fire exposure; specifically in connection with Test Methods E 119, E 152, and E 163, the ratio of the area under the curve of average furnace temperature to the area under the standard time/temperature curve, each from the start of the test to the end or time of failure, and above the base temperatures 68°F (20°C). (1976)

fire-test-response characteristic, *n*—a response characteristic of a material, product, or assembly, to a prescribed source of heat or flame, under controlled fire conditions; such response characteristics may include but are not limited to ease of ignition, flame spread, heat release, mass loss, smoke generation, fire endurance, and toxic potency of smoke. (1992)

DISCUSSION—A fire-test-response characteristic can be influenced by variables of exposure such as ignition source intensity, ventilation, geometry of item or enclosure, humidity, or oxygen concentration. It is not an intrinsic property such as specific heat, thermal conductivity, or heat of combustion, where the value is independent of test variables.

A fire-test-response characteristic may be described in one of several

terms. Smoke generation, for example, may be described as smoke opacity, change of opacity with time, or smoke weight. No quantitative correlation need exist between values of a fire-test-response characteristic for different materials, products, or assemblies, as measured by different methods or tested under different sets of conditions for a given method. (1992)

flame, *n*—a hot, usually luminous zone of gas that is undergoing combustion. (1991)

DISCUSSION—The luminosity of a flame is frequently caused by the presence of glowing particulate matter suspended in the hot gases. (1991)

flame front, *n*—the leading edge of a flame propagating through a gaseous mixture or across the surface of a liquid or solid. (1983)

flameproof, adj—an inappropriate and misleading term. Do not use. (1983)

DISCUSSION—This term was originally used to describe the treatment of textile fabrics or other organic products to make them resistant to ignition. However, the term has been misunderstood to mean an absolute or unconditional property, and therefore the use of the term, flameproof, is inappropriate and misleading. (1983)

flame resistance, *n*—the ability to withstand flame impingement or give protection from it. (1983)

flame resistant, *adj*—having flame resistance. (1983)

flame resistive, n—See **flame resistant,** the preferred term. (1983)

flame retardant, n—a deprecated term. Do not use. (1986)

flame retardant, *adj*—not a defined term. Use only as a modifier with defined compound terms: **flame-retardant chemical, flame-retardant coating,** and **flame-retardant treatment.** (1986)

flame-retardant chemical, *n*—a chemical, which when added to a combustible material, delays ignition and reduces flame spread of the resulting material when exposed to flame impingement. (See also **fire-retardant chemical.**) (1986)

flame-retardant coating, *n*—a fluid-applied surface covering on a combustible material which delays ignition and reduces flame spread when the covering is exposed to flame impingement. (See also **fire-retardant coating.**) (1986)

flame-retardant treatment, *n*—the use of a flame-retardant chemical or a flame-retardant coating. (See also **fire-retardant treatment.**) (1986)

flame speed, *n*—the velocity of propagation of a flame front through a gaseous mixture (fuel and oxidizer) relative to a reference point. (1982)

flame spread, n—See **surface flame spread, volumetric flame spread.** (1989)

flame spread index, *n*—a comparative measure expressed as a dimensionless number, derived from visual measurements of the spread of flame vs. time in Test Method E 84. (2001)

DISCUSSION—Classifications have been developed using these values. This index is different from that derived in Test Methods E 162 or D 3675. (2001)

flameproof, *adj*—an inappropriate and misleading term. Do not use. (1983)

DISCUSSION—This term was originally used to describe the treatment of textile fabrics or other organic products to make them resistant to ignition. However, the term has been misunderstood to mean an absolute or unconditional property, and therefore the use of the term, flameproof, is inappropriate and misleading. (1983)

flammable, *adj*—(*1*) capable of burning with a flame under specified conditions, or (*2*) when used to designate high hazard, subject to easy ignition and rapid flaming combustion. (1995)

DISCUSSION—The first definition is needed as it is the definition recognized by the principal international standardization bodies, the International Electrotechnical Commission (IEC) and the International Organization for Standardization (ISO). The second definition has been the ASTM Terminology E 176 definition and is the principal definition recognized by the lay public. The terms in the second definition "easy ignition" and "rapid flaming combustion," may seem insufficiently precise but are made precise in standards that use the terms in that way, such as standards on the fire hazards of materials (for example, NFPA 704; NFPA 321, on flammable liquids; and NFPA 55, on flammable gases). (1995)

flashover, *n*—the rapid transition to a state of total surface involvement in a fire of combustible materials within an enclosure. (1997)

DISCUSSION—Flashover is a fluid–mechanical combustion instability within an enclosure that occurs when the surface temperatures of an enclosure and its contents rise rapidly, producing combustible gases and vapors, and the enclosure heat flux becomes sufficient to heat these gases and vapors to their ignition temperatures. At flashover, the volume occupied by hot combustion gases rapidly increases and ends up comprising more than 50% of the enclosure's volume. Experimentally it is found that flashover occurs when the upper gas layer temperature surpasses 600°C or when the radiant heat flux at the floor surpasses 20 kW/m^2. Visually, flashover often corresponds to a transition from flaming on a few surfaces to flames throughout the volume of the enclosure. (2002)

gasification, *n*—transformation of a solid and/or liquid material into a gaseous state. (2001)

glow, *n*—(*1*) the visible light emitted by a substance because of its high temperature. (*2*) visible light, other than from flaming, emitted by a solid undergoing combustion. (1989)

gross heat of combustion, *n*—the maximum amount of heat per unit mass that theoretically can be released by the combustion of a material, product, or assembly; it can be determined experimentally only under conditions of high pressure and in pure oxygen (contrast **effective heat of combustion**). (2003)

heat flux, *n*—heat transfer to a surface per unit area, per unit time. (2000)

DISCUSSION—The heat flux from an energy source, such as a radiant heater, can be measured at the initiation of a test (such as Test Method E 1354 or Test Method E 906) and then reported as the incident heat flux, with the understanding that the burning of the test specimen can generate additional heat flux to the specimen surface. The heat flux can also be measured at any time during a fire test, for example as described in Guide E 603, on any surface, and with measurement devices responding to radiative and convective fluxes. Typical units are kW/m^2, $kJ/(s\ m^2)$, W/cm^2, or $BTU/(s\ ft^2)$. (2001)

heat release rate, *n*—the heat evolved from the specimen, per unit of time. (1997)

heat stress, *n*—(physiological) adverse condition caused by exposure to elevated temperature, radiant heat flux, or combinations of these factors. (1988)

ignition, *n*—the initiation of combustion. (1989)

DISCUSSION—The combustion may be evidenced by glow, flame, detonation, or explosion. The combustion may be sustained or transient. (1989)

ignition temperature, *n*—the lowest temperature at which sustained combustion of a material can be initiated under specified test conditions. (1990)

DISCUSSION—While the phenomenon of combustion may be transient or sustained, in fire testing practice, the ignition temperature is reached when combustion continues after the pilot source is removed. (1990)

incandescence, *n*—emission of light produced by a material when intensely heated; it can be produced with or without combustion. (1997)

mass burning rate, *n*—mass loss per unit time by materials burning under specified conditions. (1989)

noncombustible, *adj*—not combustible. (contrast **combustible.**) (2003)

DISCUSSION—In fire testing, non-combustibility is often assessed by means of Test Method E 136 or ISO 1182. (2001)

optical density of smoke, *D, n*—a measure of the attenuation of a light beam passing through smoke, expressed as the common logarithm of the ratio of the incident flux, I_o, to the transmitted flux, *I*. ($D = \log_{10}(I_o/I)$). (1989)

orientation, *n*—the plane in which the exposed face of the specimen is located during testing. (1977)

DISCUSSION—The orientation may be vertical, horizontal or at an angle. In the latter two cases, the specimen may be facing up or down. (1977)

oxygen consumption principle, *n*—the expression of the relationship between the mass of oxygen consumed during combustion and the heat released. (1998)

oxygen depletion, *n—in a fire,* reduction of oxygen (O_2) content of an atmosphere as a result of combustion. (1988)

oxygen index,*n*—minimum concentration of oxygen in a mixture of oxygen and nitrogen that will just support flaming combustion of a material under specified conditions. (2000)

piloted ignition, *n*—ignition of combustible gases or vapors by a pilot source of ignition (compare **spontaneous ignition, unpiloted ignition**). (1991)

pilot source of ignition, *n*—a discrete source of energy, such as, for example, a flame, spark, electrical arc, or glowing wire (compare **piloted ignition, unpiloted ignition**). (1991)

pyrolysis, *n*—process of simultaneous phase and chemical species change caused by heat (compare **smoldering**). (1991)

reaction to fire—response of a material in contributing by its own decomposition to a fire to which it is exposed, under specified conditions. (2002)

DISCUSSION—In fire testing, it is usual to distinguish between two types of fire-test-response characteristics: those associated with "reaction to fire" and those associated with "fire resistance" or "fire endurance." (2002)

screening test, *n—as related to fire,* a fire-response test performed to determine whether a material, product, or assembly (*a*) exhibits any unusual fire-related characteristics, (*b*) has certain expected fire-related characteristics, or (*c*) is capable of being preliminarily categorized according to the fire characteristic in question. (1993)

self heating, *n*—a rise in the temperature of a material, assemblage, or product caused by internal, exothermic chemical reaction. (1985)

self ignition, n—See **spontaneous ignition,** the preferred term. (1985)

self-propagation of flame, *n*—propagation of a flame front after the removal of any applied energy source. (2001)

smoke, *n*—the airborne solid and liquid particulates and gases evolved when a material undergoes pyrolysis or combustion. (1989)

DISCUSSION—So-called chemical smokes are excluded from this definition. (1989)

smoke developed index, *n*—a comparative measure expressed as a dimensionless number, derived from measurements of smoke obscuration vs. time in Test Method E 84. (2001)

DISCUSSION—Classifications have been developed using these values. (2001)

smoke obscuration, *n*—reduction of light transmission by smoke, as measured by light attenuation. (2001)

smoke toxicity, *n*—the propensity of smoke to produce adverse biochemical or physiological effects. (See **smoke.**) (1988)

smoldering, *n*—combustion of a solid without flame, often evidenced by visible smoke. (1979)

DISCUSSION—Smoldering can be initiated by small sources of ignition, especially in dusts or fibrous or porous materials, and may persist for an extended period of time after which a flame may be produced. (1979)

spontaneous ignition, *n*—unpiloted ignition caused by an internal exothermic reaction (compare **piloted ignition**). (1991)

standard temperature/time curve (standard time/temperature curve), *n—in fire testing,* a graphical representation derived from prescribed time-temperature relationships and used to control furnace temperature with progressing time. (1989)

DISCUSSION—One example is found in Test Methods E 119. (1989)

superimposed load, *n*—force applied to a specimen or structure other than that associated with its own mass. (1979)

surface flame spread, *n*—the propagation of a flame away from the source of ignition across the surface of a liquid or a solid. Compare: **volumetric flame spread** and **burning velocity.** (1989)

thermal decomposition, *n*—a process of extensive chemical species change caused by heat (different from thermal degradation, q.v.; compare **pyrolysis**). (1992)

thermal degradation, *n*—a process whereby the action of heat or elevated temperature on a material, product, or assembly causes a loss of physical, mechanical, or electrical properties (different from **thermal decomposition,** q.v.). (1992)

toxicity, *n*—the propensity of a substance to produce adverse biochemical or physiological effects. (1988)

toxic hazard, *n—as related to fire*, the potential for physiological harm from toxic products of combustion. (1995)

DISCUSSION—Toxic hazard reflects both the quantity of toxic products and the quality of those products, which is given by toxic potency. Toxic hazard is not the only hazard associated with fire. Toxic hazard is not an intrinsic characteristic of a material or product but will depend upon the fire scenario, the condition of use of the material or product, and possibly other factors. (1995)

toxic potency, *n—as applied to inhalation of smoke or its component gases*, a quantitative expression relating concentration and exposure time to a particular degree of adverse physiological response, for example, death, on exposure of humans or animals. (1991)

DISCUSSION—The toxic potency of the smoke from any material, product, or assembly is related to the composition of that smoke which, in turn, is dependent upon the conditions under which the smoke is generated. (1991)

unpiloted ignition, *n*—ignition caused by one or more sources of energy without the presence of a pilot source of ignition (compare **piloted ignition, spontaneous ignition**). (1991)

upholstered, *adj*—covered with material (as fabric or padding) to provide a soft surface. (1999)

volumetric flame spread, *n*—flame propagation through the volume of a gaseous mixture. (1989)

ANNEX

(Mandatory Information)

A1. DEFINITIONS OF TERMS

A1.0.1 Terms, their definitions, and the standard(s) to which they apply are given below in alphabetical order:

acoustical ceiling panel, *n*—a form of a prefabricated sound absorbing ceiling element used with exposed suspension systems (see Specification E 1264). (1999) **E 2032**

acoustical ceiling tile, *n*—a form of a prefabricated sound absorbing ceiling element used with concealed or semi-exposed suspension systems, stapling, or adhesive bonding (see Specification E 1264). (1999) **E 2032**

air drop, *n*—lengths of open run conductors or cables supported only at each end. (1995) **E 1725**

attic, *n*—an accessible enclosed space in a building immediately below the roof and wholly or partly within the roof framing. (1996) **E 970**

assembly, *n*—a unit or structure composed of a combination of materials or products, or both. (2000) **E 1995, E 2102**

backing board, *n*—a noncombustible insulating board, mounted behind the specimen during actual testing to satisfy the theoretical analysis assumption of no heat loss through the specimen. It shall be roughly 25 ± 5 mm thick with a density no greater than 200 ± 50 kg/m^3. (1997) **E 1321**

batch sampling—sampling over some time period in such a way as to produce a single test sample for analysis. (1981) **E 800**

beams, *n*—all horizontally oriented structural members employed in building construction and known variously as beams, joists, or girders. (1999) **E 2032**

blackbody temperature, *n*—the temperature of a perfect radiator—a surface with an emissivity of unity and, therefore, a reflectivity of zero. (1997) **E 648**

bolster, *n*—pillow or similarly shaped unit containing upholstery material covered by upholstery cover material that may or may not be attached to the upholstered furniture item but is sold and delivered with it. (1994) **E 1352**

carboxyhemoglobin saturation, *n*—the percent of blood hemoglobin converted to carboxyhemoglobin from reaction with inhaled carbon monoxide. (1996) **E 1678**

ceiling protective membrane, *n*—a ceiling membrane attached to or suspended from the structural members of the floor or ceiling assembly, usually by hanger wire or threaded rods, consisting of a grid suspension system with lay-in ceiling panels or a grid of steel furring channels to which the ceiling membrane is directly attached, intended to provide fire protection, acoustical and or aesthetic enhancements, or both. (1999) **E 2032**

combustion products—airborne effluent from a material undergoing combustion; this may also include pyrolysates. (1981) **E 800**

composite, *n*—a combination of materials, which generally are recognized as distinct entities, for example, coated or laminated materials. (2000) **E 2067, E 2102, E 1995**

composite, *n*—as applied to loadbearing elements an interaction between structural components which is to be taken into account in the evaluation of load capacity. (1999) **E 2032**

concentration-time curve, *n*—a plot of the concentration of a gaseous toxicant as a function of time. (1996) **E 1678**

continuous (as related to data acquisition)**,** *adj*—conducted at data collection intervals of 5 s or less. (2000) **E 2102**

continuous (as related to data acquisition)**,** *adj*—conducted at data collection intervals of 5 s or less. (1998) **E 1995**

continuous (as related to data acquisition)**,** *adj*—conducted at data collection intervals of 6 s or less. (2000) **E 2067**

corridor, *n*—an enclosed space connecting a room or compartment with an exit. The corridor may include normal extensions, such as lobbies and other enlarged spaces. (1997) **E 648**

compensating thermocouple, *n*—a thermocouple for the purpose of generating an electrical signal representing long-term changes in the stack metal temperatures wherein a fraction of the signal generated is subtracted from the signal developed by the stack-gas thermocouples. (1997) **E 1317**

critical flux at extinguishment, *n*—a flux level at the specimen surface corresponding to the distance of farthest advance and subsequent self-extinguishment of the flame on