



SLOVENSKI STANDARD
oSIST prEN ISO 13943:2016
01-junij-2016

Požarna varnost - Slovar (ISO/DIS 13943:2016)

Fire safety - Vocabulary (ISO/DIS 13943:2016)

Brandschutz - Vokabular (ISO/DIS 13943:2016)

Sécurité au feu - Vocabulaire (ISO/DIS 13943:2016)

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en

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Fire safety — Vocabulary

Sécurité au feu — Vocabulaire

ICS: 01.040.13; 13.220.01

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This draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five month enquiry.

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ISO DIS 13943:2016(E)**Foreword**

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 13943 was prepared by Technical Committee ISO/TC 92, *Fire safety*.

This second edition cancels and replaces the first edition, which has been technically revised.

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Introduction

Over the last two decades, there has been significant growth in the field of fire safety. There has been a considerable development of fire safety engineering design, especially as it relates to construction projects, as well as the development of concepts related to performance-based design. With this continuing evolution, there is an increasing need for agreement on a common language in the broad and expanding area of fire safety, beyond what traditionally has been limited to the field of fire testing.

The first edition of ISO 13943 contained definitions of about 180 terms. However, the areas of technology that are related to fire safety have continued to evolve rapidly and this edition contains many new terms and their definitions as well as revised definitions of some of the terms that were in earlier editions.

This International Standard defines general terms to establish a vocabulary applicable to fire safety, including fire safety in buildings and civil engineering works and other elements within the built environment. It will be updated as terms and definitions for further concepts in the field of fire safety are agreed upon and developed.

It is important to note that, it is possible that, when used for regulation, some fire safety terms may have a somewhat different interpretation than the one used in this International Standard and, in that case, the definition given in this International Standard may not apply.

The terms in this International Standard are:

- fundamental concepts,
- more specific concepts, such as those used specifically in fire testing or in fire safety engineering and may be used in ISO or IEC fire standards, and
- related concepts, as exemplified by terms used in building and civil engineering.

The alphabetical index includes all terms, including preferred and non-preferred terms. There is also an index of deprecated terms.

Fire safety — Vocabulary

1 Scope

This International Standard defines terminology relating to fire safety as used in ISO and IEC fire standards.

2 Vocabulary structure

The layout is designed according to ISO 10241, unless otherwise specified. The terms are presented in English alphabetical order and are in bold type except for deprecated terms which are in normal type.

In a definition, example and Note to entry, reference to another entry in bold face is followed by the entry number in brackets, when it is first mentioned.

Entry number, preferred term and definition are the mandatory elements of each entry. Other elements appear only when appropriate.

Where a given term describes more than one concept, the concepts are listed as terms in separate consecutive entries and each one of the terms is individually numbered.

If a term has a general meaning but is being used with a specific meaning in the field of fire, the specific area is indicated in parentheses at the beginning of the definition.

Word class, e.g. "noun", "adj.", "verb", is indicated if there is a risk of misunderstanding.

Note: In addition to terms and definitions used in two of the three official ISO languages (English and French), this International Standard gives the equivalent terms and definitions in German; these are published under the responsibility of the member body for Germany (DIN). However, only the terms and definitions given in the official languages can be considered as ISO terms and definitions.

The following is a link to the ISO Online Browsing Platform (OBP): www.iso.org/obp.

3 Definition of the term "item"

For the purposes of this International Standard, in the English version the term "item" (and in French "objet") is used in a general meaning to represent any single object or assembly of objects, and may cover, for example, material, product, assembly, structure or building, as required in the context of any individual definition.

If the "item" under consideration is a test specimen then the term "test specimen" is used.

The German version uses terminology such as material, product, kit, assembly and/or building to clarify the meaning of each definition.

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4 Normative references

The following normative documents contain provisions, which through reference in this text constitute provisions of this International Standard.

There are no normative references in this document.

5. Terms and definitions

5.1

abnormal heat

<electrotechnical> heat that is additional to that resulting from use under normal conditions, up to and including that which causes a **fire**.

5.2

absorptivity

ratio of the absorbed radiant heat flux to the incident radiative heat flux

Note to Entry: Absorptivity is dimensionless.

5.3

acceptance criteria

criteria that form the basis for assessing the acceptability of the safety of a design of a **built environment**.

Note to Entry The criteria can be qualitative, quantitative or a combination of both.

5.4 accuracy

closeness of the agreement between the result of a measurement and the true value of the measurand.

Note to Entry: ASTM E176 (Standard Terminology of Fire Standards)

5.5

activation time

time interval from response by a sensing device until the **suppression system**, smoke control system, alarm system or other fire safety system is fully operational

5.6

Active fire protection

Method(s) used to reduce or prevent the spread and effects of fire, heat or smoke by virtue of detection and/or suppression of the fire and which require a certain amount of motion and/or response to be activated.

Note to Entry: Examples include the application of agents (e.g., halon gas or water spray) to the fire or the control of ventilation and/or smoke.

Cf. passive fire protection, suppression systems

5.7

actual delivered density

ADD

volumetric flow rate of water per unit area that is delivered onto the top horizontal surface of a simulated burning **combustible** array.

Note to Entry 1 It is typically determined relative to a specific **heat release rate** of a **fire**.

Note to Entry 1 ADD can be measured according to ISO 6182-7.

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Note to Entry 2 The typical units are $\text{mm}\cdot\text{min}^{-1}$.

5.8

acute toxicity

toxicity that causes rapidly occurring **toxic** effects.

Cf. **toxic potency**.

5.9

aerosol

suspension of droplets and/or solid particles in a gas phase which are generated by fires.

Note to Entry: The size of the droplets or particles typically ranges from under 10 nm to over 10 μm .

Cf. droplets

5.10

aerosol particle

individual piece of solid material that is part of the dispersed phase in an aerosol.

Note to Entry: There are two categories of fire aerosol particles: unburned or partially burned particles containing a high proportion of carbon (i.e. "soot"), and relatively completely combusted, small particle sized "ashes". Soot particles of small diameter, (i.e. about 1 μm), typically consist of small elementary spheres of between 10 nm and 50 nm in diameter. Formation of soot particles is dependent on many parameters including nucleation, agglomeration and surface growth. Oxidation of soot particles (i.e. further combustion) is also possible.

5.11

afterflame

flame that persists after the **ignition source** has been removed.

5.12

afterflame time

length of time for which an **afterflame** persists under specified conditions.

Cf. **duration of flaming** <https://standards.iteh.ai/catalog/standards/sist/74eada60-4ce0-4dea-9bf6-08faf52191ef/sist-en-iso-13943-2017>

5.13

afterglow

persistence of **glowing combustion** after both removal of the **ignition source** and the cessation of any **flaming combustion**.

5.14

afterglow time

length of time for which an **afterglow** persists under specified conditions.

5.15

agent outlet

orifice of a piping system by means of which an extinguishing fluid can be applied towards the source of a **fire**.

5.16

alarm time

time interval between **ignition** of a **fire** and activation of an alarm.

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Note to Entry: The time of ignition may be known, e.g. in the case of a **fire model** or a **fire test**, or it may be assumed, e.g. it may be based upon an estimate working back from the time of detection. The basis on which the time of ignition is determined is always stated when the alarm time is specified.

5.17

alight, adj.**lit**, adj. CA, US

lighted, adj.

undergoing **combustion**.

5.18

analyte

substance that is identified or quantified in a specimen during an analysis

5.19

arc resistance

⟨electrotechnical⟩ ability of an electrically insulating material to resist the influence of an electric arc, under specified conditions

Note to Entry: The arc resistance is identified by the length of the arc, the absence or presence of a conducting path, and the burning or damage of the **test specimen**.

5.20

area burning rate

burning rate (deprecated)

rate of burning (deprecated)

area of material **burned** per unit time under specified conditions.

Note to Entry: The typical units are $\text{m}^2\cdot\text{s}^{-1}$

5.21

arsoncrime of setting a **fire**, usually with intent to cause damage. <https://standards.iteh.ai/catalog/standards/sist/74eada60-4ce0-4dea-9bf6-08faf52191ef/sist-en-iso-13943-2017>

5.22

ash**ashes**mineral residue resulting from **complete combustion**.

5.23

asphyxiant

toxicant that causes hypoxia, which can result in central nervous system depression or cardiovascular effects.

Note to Entry Loss of consciousness and ultimately death may occur.

5.24

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auto-ignition**spontaneous ignition**

self-ignition

unpiloted ignition

spontaneous combustion (deprecated)

ignition caused by an internal exothermic reaction.Note to Entry 1 The ignition may be caused either by **self-heating** or by heating from an external source

Note to Entry 2 In North America "spontaneous ignition" is the preferred term used to designate ignition caused by self-heating.

Cf. piloted ignition, spontaneous ignition temperature

5.25

auto-ignition temperatureminimum temperature at which **auto-ignition** is obtained in a **fire test**.

Note to Entry 1: The typical units are °C.

Cf. spontaneous ignition temperature

5.26

available safe escape time**ASET**

time available for escape

for an individual occupant, the calculated time interval between the time of **ignition** and the time at which conditions become such that the occupant is estimated to be incapacitated, i.e. unable to take effective action to **escape** to a **safe refuge** or **place of safety**.Note to Entry 1 The time of ignition may be known, e.g. in the case of a **fire model** or a **fire test**, or it may be assumed, e.g. it may be based upon an estimate working back from the time of detection. The basis on which the time of ignition is determined needs to be stated.Note to Entry 2 This definition equates **incapacitation** with failure to escape. Other criteria for ASET are possible. If an alternate criterion is selected, it needs to be stated.

Note to Entry 3 Each occupant may have a different value of ASET, depending on that occupant's personal characteristics.

5.27

backdraftrapid **flaming combustion** caused by the sudden introduction of air into a confined oxygen-deficient space that contains hot products of incomplete **combustion**.Note to Entry In some cases these conditions may result in an **explosion**.

5.28

behavioural scenariodescription of the behaviour of occupants during the course of a **fire**.

5.29

black body

form that completely absorbs any electromagnetic radiation falling upon it

5.30

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black body radiation source

ideal thermal radiation source which completely absorbs all incident heat radiation, whatever wavelength and direction.

Note to Entry 1: Adapted from ISO 80000-7:2008 (Quantities and Units: Lights) and in line with ISO14934-1 (Fire tests – Calibration and use of heat flux meters – Part 1: General principles).

Note to Entry 2: The **emissivity** of a black body radiant source is unity.

5.31

building element

integral part of a **built environment**.

Note to Entry 1 This includes floors, walls, beams, columns, doors, and penetrations, but does not include contents.

Note to Entry 2 This definition is wider in its scope than that given in ISO 6707-1.

5.32

built environment

building or other structure.

EXAMPLES Other structures include off-shore platforms, civil engineering works such as tunnels, bridges and mines, and means of transportation such as motor vehicles and marine vessels.

Note to Entry ISO 6707-1 contains a number of terms and definitions for concepts related to the built environment.

5.33

buoyant plume

convective updraft of fluid above a heat source.

Cf. **fire plume**

5.34

burn, intransitive verb

undergo **combustion**.

5.35

burn, transitive verb

cause **combustion**.

5.36

burned area

that part of the **damaged area** of a material that has been destroyed by **combustion** or **pyrolysis**, under specified conditions.

Note to Entry The typical units are m²

5.37

burned length

maximum extent in a specified direction of the **burned area**.

Note to Entry The typical units are metres

Cf. **damaged length**.

5.38