

Fire — Vocabulary

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Committees responsible for this British Standard

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- BRE/LPC Laboratories
- British Fire Protection Systems Association
- Chief and Assistant Chief Fire Officers
- Consumer Policy Committee of BSI
- Guild of Architectural Ironmongers
- Home Office
- IFS — Institute of Fire Safety
- London District Surveyors Association
- London Fire and Emergency Planning Authority
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Foreword

This British Standard has been prepared by Technical Committee FSH/9. It supersedes BS 4422-1:1987, BS 4422-2:1990, BS 4422-3:1990, BS 4422-4:1994, BS 4422-5:1989, BS 4422-6:1988, BS 4422-7:1988 and BS 4422-9:1990, all of which are withdrawn.

Terms specific to, and in general use by, fire protection agencies have been listed in alphabetical order, ignoring spaces, hyphens or other punctuation marks.

Where defined terms are used in definitions of other terms, the defined words are highlighted in **bold type**.

In some cases terms related to a common field are listed together (for example, terms related to sprinklers). Where this does not occur naturally from the alphabetical ordering, two conventions have been used.

a) If the name of the common field occurs in the middle of the term, then the order has been changed to make the common field the leading word(s), with other words following a comma. For example, **flush pattern sprinkler** is listed under **sprinkler, flush pattern**.

b) If the name of the common field does not occur in the defined term, then it has been added in brackets at the start of the term. For example, **trunk main** is listed under **<sprinkler> trunk main**.

Terms listed under either of these conventions are also listed in their natural alphabetical places, with cross-references.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 79 and a back cover.

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Introduction

BS 4422 was published in an attempt to standardize fire terms. Previously, this standard was in eight parts, each published separately over a number of years. While this performed a useful role for the disciplines covered it was not comprehensive to fire safety generally, and left large gaps in the defined terminology for certain disciplines, such as fire safety engineering and fire testing. This latter category is now well catered for with the publication of BS EN ISO 13943:2000.

It has been found that, in some cases, a particular term might be defined differently in different standards and documents. Thus, although definitions might ensure clarity within a standard, they can add to confusion where several standards with conflicting definitions are used together.

In other cases, a concept might have very similar, or identical, definitions in two standards or documents but might be expressed by different terms, again leading to confusion.

Where such variations of a single term and/or definition have been identified, a preferred term or definition has been selected. Where this has not been possible because existing definitions do not fully define the term, a new definition has been provided.

This standard, therefore, brings together, in one document, terms and definitions relating to safety from fire in existing codes and standards, government legislation, regulations and guidance documents, and documents published by other leading organizations.

The purpose of this standard is to provide a unifying document so that terms and their definitions can be used throughout the fields of fire and fire safety, so that, as far as possible, a given term will always have the same meaning and that a given concept is always expressed by the same term.

This revision of BS 4422 will eliminate the inconsistencies between standards, and other fire related codes and guidance documents, in a rapidly evolving area of technology that is related to safety from fire.

1 Scope

This standard defines terms specific to, and in general use by, fire protection agencies.

Fire safety engineering and fire testing terms are covered in BS EN ISO 13943.

This standard does not include terms where the standard dictionary definition is applicable. Neither does it include terms and definitions which are unique to any small specialized discipline within fire safety.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS EN ISO 13943, *Fire safety — Vocabulary*.

3 Terms and definitions

3.1

ablative materials

materials which gradually erode under the influence of heat and can be used to insulate/protect adjacent elements

accelerator, see **sprinkler accelerator (3.717)**

3.2

access level

<to a building> level used for normal access that either incorporates, or leads directly to, a **place of safety**

3.3

access level

<to equipment> one of several states of a **fire alarm control and indicating equipment** in which selected:

- controls can be operated;
- manual operations can be carried out;
- indications are visible; and/or
- information can be obtained

3.4

access room

room which forms the only **escape route** from an **inner room**

3.5

accommodation stairway

stairway, additional to that or those required for **escape**, provided for the convenience of occupants

active fire protection system, see **fire protection system, active (3.365)**

3.6

actuating detector

form of **fire detector**, not part of a **fire alarm system**, used to actuate subsidiary **fire protection** equipment

3.7

addressable point

point which can be individually identified at the **fire alarm control and indicating equipment**

3.8

addressable system

system in which signals from each **fire detector** and/or **fire alarm manual call point** are individually identified at the **fire alarm control and indicating equipment**

3.9

adjustable sensitivity

fire detector, the response threshold of which can be varied within **detector** specified limits without permanent indication of such variation

3.10

aerial appliance

fire appliance incorporating a **turntable ladder** or a **hydraulic platform**

AFFF, see **foam concentrate, aqueous film forming (3.435)**

3.11

air inlet

opening through which air is supplied

3.12**air release**

means by which pressurizing air is able to escape from a nominally unpressurized space to external air

3.13**alarm condition**

condition in which a **fire detector** is giving a signal specified as indicating the possible existence of a **fire**

3.14**alarm indication**

indication at the **indicating equipment** to show that a detection signal has been received

3.15**alarm of fire**

warning of **fire**, originated by a person or by an automatic device

alarm of fire, false, see **false alarm of fire (3.266)**

3.16**alarm receiving centre**

continuously manned **remote centre** in which the information concerning the state of alarm systems is displayed and/or recorded

3.17**alarm silence facility**

means of temporarily disabling or desensitizing a **smoke alarm**

alarm test valve, see **sprinkler alarm test valve (3.718)**

alarm valve, see **sprinkler alarm valve (3.719)**

3.18**alarm zone**

geographical sub-division of the protected premises in which an **alarm of fire** can be given separately from any other sub-division

alcohol resistant foam concentrate, see **foam concentrate, alcohol resistant (3.434)**

3.19**alternative escape routes**

escape routes sufficiently separated either by direction and space, or by fire-resistant construction, intended to ensure that should one be affected by **fire** the other will still be available

3.20**alternative exit**

one of two or more **exits**, each of which is separate from the other

AMAO, see **<sprinkler> assumed maximum area of operation (3.721)**

3.21**analogue detector**

fire detector which gives an output signal representing the value of the sensed phenomenon

NOTE This can be a true analogue signal or a digitally encoded equivalent of the sensed value.

3.22**ancillary service****ancillary device**

device, facility or system which is required to operate in response to a **fire alarm signal**

3.23**approach firefighting**

limited, specialized firefighting operations conducted at a distance from incidents involving very high levels of radiant, convective and contact heat, such as **fires** involving bulk **flammable gas** and/or bulk **flammable liquid**

aqueous film forming foam concentrate, see **foam concentrate, aqueous film forming (3.435)**

3.24**area of higher fire risk**

room or other area which, because of its function and/or contents, presents a greater risk of **fire** occurring and developing than elsewhere

NOTE Such areas can include a large kitchen, boiler room, large store-room and other similar risks.

3.25**area of sprinkler operation**

floor area to be flooded by a **sprinkler system** for design calculation purposes

arm pipe, see **sprinkler arm pipe (3.720)**

arrester, see **flame arrester (3.394)**

arrester element, see **flame arrester element (3.395)**

arson, see **malicious ignition (3.538)**

ASET, see **available safe escape time (3.37)**

3.26**aspirated apparatus**

sampling apparatus which draws a sample of the atmosphere into a sensor by means of a pump

aspirated foam, see **foam, aspirated (3.429)**

3.27**aspirating detection system**

fire detection system in which a sample of the atmosphere in the protected space is sucked by a fan or pump into a **fire detector** which can be remote from the protected space

3.28**assistance message**

message from the **fire ground** initiating the dispatch of additional appliances, equipment or personnel to a **fire** or other emergency

3.29**associated floor area of an atrium**

floor area in an atrium building (including the area of the atrium base) not separated from the atrium by construction having a **fire resistance** equal to that required for the elements of the structure of the building

NOTE The area of the atrium base should be included in the calculation of the associated floor area.

assumed maximum area of operation, see **<sprinkler> assumed maximum area of operation (3.721)**

attendance time, see **fire brigade attendance time (3.296)**

3.30**attendant fire phenomena**

special phenomena occurring during burning such as **flaming** debris, darting flames, formation of sparks

3.31**automatic door release mechanism**

device that can be used for retaining a door in the open position, against the action of a door closer, and automatically releasing under specified conditions

3.32

automatic fire detection and alarm system

system (other than a single self-contained **smoke alarm** or fire alarm) in which an **alarm of fire** can be initiated automatically

automatic fire hose reel, see **hose reel, automatic** (3.480)

automatic fire protection system, see **fire protection system, automatic** (3.366)

3.33

automatic fire signal

alarm of fire originated by an automatic device

automatic hose reel, see **hose reel, automatic** (3.480)

3.34

automatic lowering line

device for lowering persons from a height, fitted with an automatic brake to control the speed of descent

3.35

automatic/manual changeover device**manual only changeover device**

device that can be operated to prevent the **fire detection system** from activating the automatic release of **extinguishing medium** while the protected space is occupied

automatic powered smoke and heat exhaust ventilator, see **smoke ventilator, automatic powered** (3.709)

automatic release mechanism, see **automatic door release mechanism** (3.31)

automatic smoke and heat exhaust ventilator, see **smoke ventilator, automatic** (3.708)

automatic smoke curtain, see **smoke curtain, automatic** (3.695)

3.36

automatic steam injection system

system of pipes connected to a supply of steam and fitted with **nozzles** at suitable intervals and heights, through which steam is discharged automatically on the operation of a **fire detector**

3.37

available safe escape time**ASET**

calculated time available between ignition and the time at which tenability criteria are exceeded in a specified space in a building

average flaming time of droplets, see **flaming time of droplets, average** (3.411)

back burn, see **counter fire** (3.89)

backdraft, see **flashback** (3.424)

3.38

backing board

non-combustible board used to support, shield or insulate a specimen in a **fire test** under specified conditions

balanced system, see **extinguishing system, balanced** (3.257)

base injection, see **<foam> sub-surface application** (3.457)

3.39

beam detector

components, including any reflectors, necessary for the detection of smoke by the attenuation of an optical beam external to the **fire detector**

3.40

blast wave

pressure pulse formed by an **explosion**

3.41

boiling liquid expanding vapour explosion

BLEVE

explosion caused by the rupture of a tank containing liquid at a temperature higher than its boiling point at atmospheric pressure

NOTE If the liquid is flammable, then subsequent ignition of the dispersed vaporized contents can lead to a fireball.

3.42

boil over

condition in which the hot zone at the top of a burning liquid extends sufficiently deeply to boil water that has drained to the base of the liquid, so that a large part of the burning liquid is expelled violently when the water boils

3.43

bounding area

area of the real or notional surface (sides, bottom and top) of an enclosure round a hazard protected by a **total flooding extinguishing system**

3.44

box, inlet

box containing the inlets of foam pipes or water mains, installed in (or within the boundaries of the site of) a building

3.45

box, outlet

form of construction enclosing a **landing valve**

3.46

branch

branchpipe

fitting at the delivery end of a hose which reduces its diameter and thereby increases delivery velocity to the **nozzle**

branch system, see **sprinkler system, branch (3.775)**

3.47

breathing apparatus

self-contained apparatus designed to allow a **firefighter** to breathe in an otherwise non-respirable atmosphere for a limited period

3.48

breathing apparatus communication set

standard **breathing apparatus** incorporating a means of communication between the breathing apparatus control personnel and the leader of the breathing apparatus team

3.49

breathing apparatus, compressed air

breathing apparatus using compressed air, in which the expelled air is not re-used and the supply is governed by the wearer's breathing demand

3.50

breathing apparatus control board

display board comprising sections into which **breathing apparatus identification tallies** can be inserted and on which additional information can be recorded

3.51

breathing apparatus control board, stage 1

breathing apparatus control board used when there is not more than one entry point to a building in use and when there are not more than four **breathing apparatus** wearers

3.52**breathing apparatus control board, stage 2**

breathing apparatus control board used when there is more than one entry point to a building in use, or when more than four wearers are deployed, to co-ordinate and control the activities at stage 1 end points

3.53**breathing apparatus identification tally**

personal control tag on which is recorded the name of the wearer, time of entry to the building, and cylinder pressure at that time (the tag is left with the breathing apparatus control officer)

3.54**breathing apparatus, positive pressure**

breathing apparatus wherein a constant pressure, above that of atmospheric pressure, is maintained within the face mask

3.55**breathing apparatus, regenerative**

breathing apparatus, usually using oxygen, in which the exhaled air is recycled and the supply is governed at a constant rate

3.56**breathing apparatus safety line**

light line, on which there may be indicators, used to assist **breathing apparatus** wearers to find their way out of a smoke-filled environment

3.57**breathing apparatus safety line, personal**

short line which can be clipped on to a **breathing apparatus safety line** as an additional safety precaution

3.58**breeching, collecting**

fitting used to unite two or more lengths of hose into one hose or pipe

3.59**breeching, control**

dividing or **collecting breeching** fitted with a **control valve** to direct flow to or from either or both outlets

3.60**breeching, dividing**

fitting used to divide one line of hose into two or more

3.61**building protection, active**

provision of a **fire detection system** and/or an **extinguishing system** within a building to limit structural damage to the building due to **fire**

3.62**bund**

raised perimeter of an area used to contain and prevent the spreading of liquids

NOTE See also **catchpit**.

burnback time, see **foam burnback time** (3.431)

3.63**catchpit**

enclosure, which may be filled with stone chippings or similar material, below the level of the surrounding ground and intended to contain leakage or spillage of flammable and/or toxic liquids

NOTE See also **bund**.

3.64**cavity barrier**

construction provided to close a concealed space against penetration of **smoke** or flame, or provided to restrict the movement of **smoke** or flame within such a space

3.65**ceiling hook**

tool consisting of a pole, having a metal point with a spur at right angles, mainly used to pull down ceilings or other similar constructions to gain access to burning materials

3.66**ceiling jet**

flow under a ceiling arising from the deflection of a rising plume of hot gas and **smoke** from a **fire**

3.67**ceiling membrane**

non-loadbearing element of building construction designed to provide horizontal **fire separation** as distinct from protection to any floor or roof above

ceiling screen, see **smoke baffle** (3.686)

central commercial alarm centre, see **alarm receiving centre** (3.16)

central fire alarm station, see **alarm receiving centre** (3.16)

centrally supplied luminaire, see **emergency luminaire, centrally supplied** (3.145)

central monitoring station, see **alarm receiving centre** (3.16)

3.68**channeling screen**

smoke curtain or **automatic smoke curtain** fitted beneath a balcony to prevent sideways emission of **smoke** from a **fire** along the underside of the balcony

3.69**check valve**

valve that permits flow of fluid in one direction only

chemical foam, see **foam, chemical** (3.432)

3.70**chimney effect**

upward movement of hot fire effluent caused by convection currents confined within an essentially vertical enclosure

NOTE This usually draws more air into the **fire**.

class, classification, see **<marine> division** (3.542); **fire classification** (3.307)

3.71**coincidence detection**

detection method in which an **alarm condition** is obtained only when at least two independent **fire detectors** show the presence of **fire**

3.72**collecting head**

fitting used to connect one or more lines of hose to the suction inlet of a pump

3.73**collector point**

unmanned **remote centre** in which the signals from a number of **fire detection** and/or **extinguishing systems** are collected for onward transmission to another **remote centre**

3.74**collector pumping**

method of increasing water supplies by stationing pumps at a number of sources and delivering water to the collecting head of a single pump from which it is pumped onto the **fire**

3.75**combination detector**

fire detector combining two or more detecting principles in a single housing

combined emergency luminaire, see **emergency luminaire, combined** (3.146)

3.76**combined medium extinguishing system**

system in which more than one **extinguishing medium** is used to **extinguish** a **fire** (e.g. foam and **dry powder**)

3.77**combustible dust**

dust that is combustible or ignitable

3.78**combustion**

exothermic reaction of a substance with an oxidizer

NOTE **Combustion** generally emits effluent accompanied by flames and/or visible light.

combustion products, see **products of combustion** (3.620)

command post, see **control point** (3.88)

common balcony escape, see **escape, common balcony** (3.164)

common escape stair, see **escape stair, common** (3.178)

compartment, see **fire compartment** (3.308)

3.79**compartmentation**

division of a building into **fire compartments** intended to contain a **fire** within the compartment of fire origin

compartment, fire, see **fire compartment** (3.308)

3.80**compartment floor**

floor used to separate one **fire compartment** from another

3.81**compartment wall**

wall used to separate one **fire compartment** from another

3.82**competent person**

person with the necessary training and experience, and with access to the requisite tools, equipment and information, accepted by the relevant authorities as capable of carrying out a defined task

complete discharge, see **<extinguisher> complete discharge** (3.244)

compound self-contained emergency luminaire, see **emergency luminaire, compound self-contained** (3.151)

concentration ratio of a foam solution, see **foam concentrate ratio** (3.440)

3.83**conflagration**

fire of large extent with a moving front involving a number of buildings or a large area

3.84**continuous dilution**

the technique of preventing the formation of an explosive gas/air mixture by the supply of a protective gas at such a rate that the concentration of the gas/air mixture is always kept below the **lower explosive limit**

continuous grade of release, see **grades of release (3.465)**

control and indicating equipment, see **fire alarm control and indicating equipment (3.274)**

3.85**control centre**

permanently staffed room within or near the premises at risk for the receipt of **emergency calls**, equipped with means for indicating the situation in each of the **protected premises** and the communications needed for transmission of calls for assistance to emergency services

control equipment, see **fire alarm control and indicating equipment (3.274)**; **lift control equipment (3.525)**

3.86**control for automatic fire protection system**

automatic device used to actuate **automatic fire protection system** after receiving a signal from the **fire alarm control and indicating equipment**

3.87**controlled fire load**

fire load that is limited by means of management controls on the quantities of combustible material present

3.88**control point**

specially marked position established for tactical command at the scene of a major incident

control room, see **fire brigade control room (3.297)**

control unit, see **fire brigade control unit (3.298)**

control valve, see **sprinkler control valve (3.726)**

3.89**counter fire**

practice of starting a controlled **fire** to create a **fire break** in the path of an advancing **conflagration**, usually in forest firefighting

3.90**coupling**

device for connecting together hoses, valves, **nozzles**, etc., so as to secure continuity from the source of water supply to the delivery point

3.91**critical fire load**

minimum **effective fire load** required in a **fire compartment** to produce a **fire** of sufficient severity to cause failure of **fire resistant** barriers or structural elements

3.92**critical heat flux at extinguishment**

incident heat flux, under specified conditions, at the point on the surface of an item where the flame ceases to advance and might subsequently go out

3.93**critical irradiance**

minimum irradiance at which **ignition (pilot or spontaneous as specified)** can be effected, regardless of duration

3.94**critical temperature, structural**

temperature at which a structural element is assumed to be unable to support the applied load

3.95**damage control unit****salvage tender**

fire appliance which carries a wide range of equipment designed to minimize or to prevent water and other damage occasioned during **fire brigade** operations

3.96**damper, fire**

moveable closure, within a duct, which is operated automatically or manually and is designed to prevent the passage of **fire**

3.97**damper, smoke**

moveable closure within a duct which is operated automatically or manually and is designed to prevent the passage of **smoke**

3.98**damping down**

wetting operations required after a **fire** is believed to have been **extinguished**, to deal with possible hidden smouldering, hot debris, etc.

3.99**data cabinet**

cabinet designed to protect media and valuables against the effects of **fire**

NOTE A data cabinet can have doors, drawers, lids and fittings.

3.100**dead end**

area from which **escape** is possible in one direction only

3.101**deep-seated fire**

fire involving solids subject to smouldering

3.102**deflagration flame arrester**

flame arrester designed to prevent a deflagration from being transmitted

delivery hose, see **hose**, **delivery** (3.477)

deluge system, see <**sprinkler**> **deluge installation** (3.729)

3.103**depressurization**

smoke control using pressure differentials where the air pressure in adjacent spaces is reduced to below that in the protected space

3.104**depressurized space**

part of a building from which air and **smoke** are extracted for the purpose of **depressurization**

3.105**design concentration**

concentration of gaseous **extinguishing medium** necessary to extinguish a particular fuel, with a specified safety factor

design density, see **sprinkler design density** (3.730)

3.106

design escape time

calculated time from ignition until the time at which all the occupants of a specified part of a building should have been able to enter a **place of safety**

3.107

design fire

largest **fire** with which the **fire precautions** in a building are expected to be effective

design point, see **sprinkler design point (3.731)**

3.108

detachable detector

fire detector designed to be easily removed from its normal operating position for maintenance and servicing purposes

3.109

detection pressure

pressure threshold at which a signal is given denoting the occurrence of an **explosion**

3.110

detection signal

signal from a detection device to show that a **fire** or **explosion** has been detected

3.111

detection time

interval between ignition and the detection of **combustion** by an automatic system or otherwise

3.112

detection zone

geographical sub-division of the protected premises in which the detection of a **fire** can be indicated separately from any other sub-division

detector, see **fire detector (3.315)**; **explosion detector (3.204)**; **flammable gas detector (3.416)**

3.113

detonation flame arrester

flame arrester used to prevent the transmission of a detonation

3.114

digital communicator

signalling equipment that automatically communicates using a switched telephone network and exchanges digital information on the state of the alarm system

direct distance, see **<escape> direct distance (3.165)**

3.115

direct line signalling equipment

signalling equipment that is used to transfer information concerned with the state of an alarm system via a dedicated communication channel

discharge rate, see **<escape> discharge rate (3.166)**

discharge value, see **<escape> discharge value (3.167)**

distance of travel, see **<escape> travel distance (3.182)**

3.116

distress signal unit

device carried by **breathing apparatus** wearers which will sound a distress signal when either manually or automatically actuated

distribution pipe, see **sprinkler distribution pipe (3.732)**

dividing breeching, see **breeching, dividing (3.60)**

3.117

division

<building> part of a building separated from the remainder of the building by a **division wall**

division <marine>, see <marine> **division** (3.542)

3.118

division wall

fire-resistant wall carried vertically throughout a building from the lowest level of any basement or sub-basement bounded by the wall, and continued sufficiently far above the roof to prevent **fire** spread between the two sides of the wall

door and shutter assembly, see **doorset** (3.121)

door assembly, see **doorset** (3.121)

3.119

door closer

mechanism attached to a door that will close the door provided that the closing force is not overcome by an **automatic door release mechanism** or obstacle

3.120

door frame

fixed surround into which can be fitted one or more door leaves

3.121

doorset

assembly consisting of a fixed part and one or more moveable parts, intended to allow or prevent access through permanent openings in **separating elements**

NOTE The term **doorset** also covers shutter assemblies.

drainage time of a foam, see **foam drainage time** (3.442)

3.122

draught

current of air towards a **fire**, supplying air for **combustion**

3.123

drencher head

open **sprinkler** fitted to a pipe or **drencher system** and designed to discharge water on to a surface to be protected against fire exposure

3.124

drencher system

automatic system of water pipes fitted with **drencher heads** at suitable intervals and heights, and designed to discharge water on to surfaces to be protected against fire exposure

3.125

drift smoke

smoke which is no longer in a stratified condition

3.126

drill tower

tower-like building primarily used for practising **fire brigade** operations and for drying hose

drop, see <**sprinkler**> **drop** (3.734)

dry fire main, see **dry riser** (3.129)

3.127

dry powder**powder suppressant**

extinguishing medium composed of finely divided solid chemical products

3.128**dry powder appliance**

vehicle wholly or mainly used to carry and apply **dry powder** to a **fire**

3.129**dry rising main****dry riser****dry fire main**

vertical pipe installed in a building for firefighting purposes, fitted with inlet connections at **fire brigade access levels** and outlet connections at specified points, which is normally dry but capable of being charged with water by pumping from **fire brigade** appliances

3.130**dual entry firefighting lift**

firefighting lift provided with two sets of doors, one used for normal operations and the other in the firefighting mode

duration of emergency lighting, see **emergency lighting duration** (3.141)

3.131**duration of flame application**

period of time during which a pilot flame is applied to a test piece

duration of operation, see <extinguisher> **duration of operation** (3.245)

3.132**dust explosion**

explosion which results from the **ignition** of a mixture of **combustible dust** and air

3.133**dwelling**

single-family house, self-contained flat or maisonette

3.134**dwelling of origin**

dwelling in which the initial ignition of a **fire** has occurred

early suppression, see <sprinkler> **early suppression** (3.737)

early suppression fast response automatic sprinkler; ESFR, see **sprinkler, early suppression fast response** (3.738)

ease of ignition (deprecated), see **minimum ignition time** (3.566)

“E” criterion, see **integrity criterion “E”** (3.510)

effective discharge time, see <extinguisher> **effective discharge time** (3.246)

effective fire load, see **fire load, effective** (3.351)

effective fire load density, see **fire load density, effective** (3.349)

3.135**ejector pump**

portable jet pump designed for removing water from depths beyond the maximum practical lift of pumps and/or in confined spaces

NOTE An **ejector pump** can be used in basements, ships' holds, etc. It is operated by water delivered from a pump through standard delivery hose

3.136**electro-magnetic automatic release mechanism**

device that converts electrical energy into a magnetic force that acts directly as the holding force, so that cessation of the electrical supply gives an automatic release

3.137**electro-mechanical automatic release mechanism**

mechanical holding device that is operated by electrical energy, so that cessation of the electrical supply gives an automatic release

3.138**emergency call**

alarm of fire or other emergency received by the **fire brigade**

3.139**emergency door**

door (which can be a **fire door**) and which is intended to be used only during an emergency

emergency escape lighting, see **escape lighting** (3.171)

emergency exit, see **exit, emergency** (3.192)

3.140**emergency lighting**

lighting for use when the supply to the normal lighting fails; it includes **escape lighting** and **standby lighting**

3.141**emergency lighting duration**

period of time for which a luminaire can continuously provide the minimum illuminance required in the emergency condition

3.142**emergency lighting, maintained**

lighting system in which all **emergency lighting** lamps are in operation at all times when normal or **emergency lighting** is required

3.143**emergency lighting, non-maintained**

lighting system in which all **emergency lighting** lamps are in operation only when the supply to the normal lighting fails

3.144**emergency lighting system**

complete but discrete **emergency lighting** installation, from the standby power source to the **emergency lighting** lamp(s), separate from the normal lighting system and able to provide **emergency lighting**

3.145**emergency luminaire, centrally supplied**

luminaire for maintained or non-maintained operation which is energized from an emergency power system remote from the luminaire

3.146**emergency luminaire, combined**

emergency lighting luminaire containing two or more lamps, at least one of which is energized from the **emergency lighting** supply and the others from normal lighting supply

3.147**emergency luminaire, compound self-contained**

a self-contained luminaire providing **emergency lighting** and an emergency supply for operating a satellite luminaire

3.148**emergency luminaire, maintained**

luminaire in which the **emergency lighting** lamps are energized at all times when normal or **emergency lighting** is required

3.149**emergency luminaire, non-maintained**

luminaire in which the **emergency lighting** lamps are energized only when the supply to the normal lighting fails

3.150**emergency luminaire, satellite**

luminaire which derives its emergency operation supply from an associated **compound self-contained emergency luminaire**

3.151**emergency luminaire, self-contained**

luminaire providing maintained or non-maintained **emergency lighting** in which all the elements, such as the battery, the lamp, the control unit and the test and monitoring facilities, where provided, are contained within the luminaire or adjacent to it (that is, within one metre)

3.152**emergency luminaire, slave**

luminaire supplied from a central emergency power source and not having its own internal secondary supply

3.153**emergency number**

special telephone number used to make contact with an emergency service

3.154**emergency tender****rescue tender**

fire appliance which carries a wide range of special equipment for use at **fires** or other emergencies

encapsulation, see **type of protection (3.852)**

enclosed stairway, see **stairway, enclosed (3.792)**

3.155**enclosure, electrical**

external casing protecting the electrical and mechanical parts of apparatus

NOTE The term excludes cables.

end-centre array, see **<sprinkler> end-centre array (3.739)**

end-side array, see **<sprinkler> end-side array (3.740)**

3.156**endurance burning condition**

steady burning of a stabilized flame at or close to a **flame arrester element**

3.157**endurance burning resistance**

ability of a **flame arrester** to withstand the **endurance burning condition** without flame transmission under specified test conditions

engineered system, see **extinguishing system, engineered (3.259)**

3.158**entry firefighting**

firefighting operations which involve voluntary direct entry into flames

3.159**equilibrium pressure**

pressure developed within a container when filled with a quantity of solid, liquid and gaseous contents under specified conditions

3.160**equipment protection**

protection that is intended to minimize the extent of fire damage to equipment in which **fire** originates

equivalent fire load density, see **fire load density**, **wood equivalent** (3.350)

3.161**escape**

movement of persons to a **place of safety** (in case of **fire** or other emergency)

3.162**escape bed lift**

escape lift able to carry persons in bed, together with any necessary attendants

3.163**escape chute**

open, slide-like escape used for emergency evacuation

3.164**escape, common balcony**

walkway, open to the air on one or more sides, forming part of a designated **escape route** from more than one occupancy

3.165**<escape> direct distance**

the shortest distance from any point within the floor area, measured within the external enclosures of the building, to the nearest **storey exit** ignoring walls, partitions and fittings, other than the enclosing walls/partitions to protected stairways

3.166**<escape> discharge rate**

number of persons which can pass through one unit of exit width in a given time

3.167**<escape> discharge value**

maximum number of persons that can pass through a given number of units of exit width in a given period of time, having regard in a multi-storey building to the capacity of the stairs

3.168**escape hatch**

means of providing **escape** from a room or part of a building in the form of a moveable or breakable panel

3.169**escape ladder**

fixed ladder, leaning ladder or hanging ladder for **escape** use

3.170**escape lift**

passenger lift protected to enable it to be used for **escape** purposes in the event of **fire**

3.171**escape lighting**

part of **emergency lighting** which is provided to ensure that the **means of escape** can be effectively identified and be sufficiently illuminated to be usable at all times

3.172**escape rope**

rope forming part of an **escape route**

3.173**escape route**

path taken by any person during an **escape**

3.174

escape route, external

escape route, external to a building, e.g. by way of a roof, stair, balcony, bridge, terrace, alleyway, walkway or external courtyard which terminates at a **final exit** or discharges into another **escape route**

3.175

escape route, pressurized

escape route which permanently or in case of **fire** is overpressured compared to the adjacent parts of the building in order to inhibit the spread of **fire** (**smoke**, gas or flames) into the **escape route**

3.176

escape route, protected

escape route which is adequately enclosed and is separated by **fire-resistant** construction from a **fire** in adjoining accommodation

3.177

escape route marker

marker forming part of a way guidance system, provided to clearly delineate a designated **escape route**

3.178

escape stair, common

protected escape stair serving more than one occupancy

3.179

escape stairway

stairway designed as a **means of escape** in case of **fire**

3.180

escape stairway, external

stairway in the open air, separated from possible **fire** in the building by **fire-resistant** structure

3.181

escape time

interval between ignition and the time at which all occupants are able to reach a **place of safety**

3.182

<escape> travel distance

actual distance to be traveled by a person from any point within the floor area to the nearest **storey exit**, having regard to the layout of walls, partitions and fittings

ESFR, see **sprinkler, early suppression fast response (3.738)**

essential ironmongery, see **ironmongery, essential (3.516)**

3.183

evacuation drill

rehearsal of the evacuation procedure involving participation of the occupants of the premises

3.184

evacuation level

storey at which **final exits** suitable for the evacuation of persons are available

evacuation lift, see **escape lift (3.170)**

3.185

evacuation plan

procedure for ensuring the safety of occupants and for limiting loss and damage to building structure, contents, the environment and business interruption

3.186

evacuation service

operation of a selected **escape bed lift** under an agreed system of management and control for the evacuation of dependent patients in the case of **fire**

3.187**evacuation signal**

audible and/or visible signal to indicate to occupants that they have to **escape**

3.188**evacuation time**

expected interval between the time at which a warning of **fire** is transmitted to the occupants and the time at which all of the occupants have reached a **place of safety**

exhauster, see **sprinkler exhauster (3.741)**

3.189**exit**

doorway or other suitable opening allowing egress from an occupied space

3.190**exit direction indicator**

part of the **way guidance system** provided to identify **escape routes** and to clearly indicate direction towards an **emergency exit**

3.191**exit direction sign**

sign indicating the direction to an **emergency exit**

3.192**exit, emergency****exit, fire**

exit on a designated **escape route**

3.193**exit, final**

termination of a designated **escape route**, from which there is direct access to a **place of ultimate safety**

3.194**exit indicator**

illuminated indicator forming part of the **way guidance system** and provided to clearly identify an **exit**

3.195**exit marking**

part of the **way guidance system** provided to clearly identify an **exit** by using luminous marking to outline part or all of the exit surround

3.196**exit, normal**

exit intended to be usable at any time while the premises are occupied

3.197**exit sign**

sign that indicates an **escape route** or a **final exit**

3.198**exit, storey**

doorway giving direct access to a protected stairway, **firefighting lobby**, external **escape route** or **place of ultimate safety**

NOTE A storey **exit** can also be a **final exit**.

3.199**exit, unit of width**

minimum width required for a single file of persons to walk through an **exit**

expansion ratio, see **foam expansion ratio (3.443)**

3.200**explosibility**

ability of a dust to take part in a cloud **explosion** when dispersed in air at a suitable concentration and in the presence of an effective ignition source

3.201**explosible dust**

a dust which, when present as a mixture with air, might explode on contact with an ignition source

explosimeter, see **flammable gas detector (3.416)**

3.202**explosion**

abrupt expansion of gas which can result from a rapid oxidation or decomposition reaction, with or without an increase in temperature

3.203**explosion decoupling**

a technique for preventing the propagation of flames and **explosions** from one apparatus to other parts of an installation by the use of special devices, e.g. mechanical high-speed shut-offs, rotary valves, or **flame arresters**

3.204**explosion detector**

device or arrangement of apparatus, containing one or more **explosion sensors**, that responds to a developing **explosion**

explosion index, see **explosion indices (3.209)**

3.205**explosion index K**

constant defining, under specified conditions, the maximum rate of pressure rise with time $(dp/dt)_{\max}$ of an **explosion** in a volume V , according to the equation $K = (dp/dt)_{\max} \times V^{1/3}$

3.206**explosion index $K_{\max}$**

maximum value of the **explosion index K** determined by tests over a wide range of reactant concentrations

3.207**explosion index p_m**

maximum overpressure attained during an **explosion** relative to the pressure in the vessel at the time of ignition

3.208**explosion index $p_{\max}$**

maximum value of the **explosion index p_m** determined by tests over a wide range of reactant concentrations

3.209**explosion indices**

numerical terms, determined in accordance with standard test methods, which characterize the contained **explosion** of a specified concentration of reactants in a vessel having a specified volume

explosion limits, see **explosive limits (3.226)**

3.210**explosion points**

temperatures of a combustible liquid at which the concentration of the saturated vapour is equal to the **upper** and **lower explosive limits**

3.211**explosion point, lower**

temperature of a combustible liquid at which the concentration of the saturated vapour in air is equal to the **lower explosive limit**

3.212**explosion point, upper**

temperature of a combustible liquid at which the concentration of the saturated vapour in air is equal to the **upper explosive limit**

3.213**explosion-pressure resistant**

property of vessels and equipment designed to withstand the expected **explosion** pressure without becoming permanently deformed

3.214**explosion-pressure shock-resistant**

property of vessels and equipment designed to withstand the expected **explosion** pressure without rupturing, but allowing permanent deformation

3.215**explosion-protected apparatus**

electrical equipment having a recognized **type of protection** designed to ensure that it will not cause an explosion of the surrounding atmosphere

3.216**explosion protection system**

composite arrangement of devices to detect automatically the onset of an **explosion** and initiate the actuation of a suppression system or other devices to limit destructive effects of the **explosion**

explosion range, see **explosive range** (3.229)

3.217**explosion relief**

part of the panel-work of an enclosure designed and constructed to release the excess pressure in the event of an **explosion**, in order to prevent injury to persons and further damage to equipment

3.218**explosion resistant**

property of vessels and equipment designed to be either **explosion-pressure resistant** or **explosion-pressure shock-resistant**

3.219**explosion sensor**

device which is responsive to the changes caused by a developing **explosion** in one or more of the environmental parameters such as pressure, temperature and/or radiation

3.220**explosion suppressant**

substance which, when dispersed into a container, can arrest a developing **explosion** in that container

3.221**explosion suppression**

abrupt halting of an incipient or developing **explosion** within an enclosure

3.222**explosion suppression system**

composite arrangement of devices to detect automatically the onset of an **explosion** and to initiate the actuation of suppression

3.223**explosion suppressor**

appliance containing an **explosion suppressant** which can be expelled by the action of internal pressure

3.224

explosive atmosphere

mixture with an oxidizing agent (usually air) of flammable substances in the form of gas, vapour, mist, powder or flock, in such proportions that it can be ignited

3.225

explosive atmosphere, potential

area where there is a possibility that an **explosive atmosphere** could be generated by releases of **flammable gases or vapours**

3.226

explosive limits

explosion limits

limits of the **explosive range**

3.227

explosive limit, lower

LEL

lowest concentration of a flammable substance in air within which an **explosion** can occur

3.228

explosive limit, upper

UEL

highest concentration of a flammable substance in air within which an **explosion** can occur

3.229

explosive range

explosion range

range of the concentration of a flammable substance in air within which an **explosion** can occur

3.230

exposed building

building which might be in danger of taking **fire** by reason of **fire** in another building or other source external to the building

3.231

exposed lining

face of the wall exposed to **fire** in a **fire test**

3.232

exposed surface

surface of a product subjected to the direct heat of a test or a **fire**

3.233

exposing building

building which, being on **fire**, might endanger any other buildings

3.234

exposure hazard

danger directly resulting from nearby **fire**

external escape stairway, see **escape stairway, external** (3.180)

3.235

extinguish

terminate **combustion**

extinguishant, see **extinguishing medium** (3.254)