Intumescent Fire Seals Association

IFSA'S GLOSSARY OF TERMS AND DEFINITIONS

The definitions and terms given below are common to many applications in the fire protection field and to the built environment. Some new definitions are those considered by the Association to be most appropriate for the application. These are not 'official' definitions, but are expressed in terms that are, hopefully, easily understood by the intended users.

ABLATIVE

A term describing the phenomenon of a fire protection by a material that is designed to be slowly eroded away by the fire action rather than by a reactive system such as intumescent.

AIR TRANSFER GRILL

A device which provides a security and privacy screen for an aperture through which air is passed as part of a ventilation system. The device may incorporate a means of diffusing the air stream. Applications include: walls, doors and low velocity duct termini **that are not part of the boundary of a fire compartment.**

APPROVED INSPECTOR

A person who is not employed by the local authority, but who is empowered by the appropriate government department, i.e. The Department of Communities and Local Government – DCLG, to carry out the normal function of the Building Control Officer. No equivalent in Scotland.

ASSOCIATED SUPPORTING CONSTRUCTION

A form of supporting construction which is specifically designed to replicate the element of construction which is to be penetrated and sealed in practice and which, when tested in conjunction with the seal, forms the direct field of application of the result of the test

BUILDING CONTROL OFFICER/OFFICIAL (BCO)

A person employed by the local authority in which a building is being built who is responsible for ensuring that the building complies with the appropriate Building Regulations for the region.

BULKHEAD SEAL OR FIRE BARRIER

A product normally 'rigid' in form, which fills the bulk of the aperture when the penetrating services fill a relatively small area of the hole in the separating element.

CAVITY BARRIER

A construction provided to close-off a concealed space against penetration of smoke or flame, or which is provided to restrict the movement of smoke or flame within such a space.

CE MARK

A mark consisting of a harmonised, stylised C and an E (CE) which identifies that the marked product complies with Essential Requirements as defined in a hEN or a European technical approval [ETAG-EAD] for its use in Construction Works. *Note: the CE mark does not imply any specific level of safety in use in respect of fire or other hazards*

CONSTRUCTION PRODUCT REGULATIONS (CPR)

The primary instrument of legislation to be adopted by all member states in the European Community as part of their Construction Regulations to ensure harmonised conditions for the marketing of construction products (REGULATION (EU) No. 305/2011).

CONSTRUCTION PRODUCTS DIRECTIVE (CPD)

The initial legislative framework devised by the European Commission to control the safety aspects of construction products in order to enable the free trade of these products across boundaries. Replaced by the Construction Products Regulations in

EDGE SEAL

A seal located around the perimeter of an aperture to make good any lack of fit between the fire barrier and the supporting construction into which it has been installed.

ESSENTIAL REQUIREMENTS

A list of six performance characteristics agreed by the Member States in the early stages of the harmonisation process as needing to demonstrate minimum standards in respect of the way their national regulatory requirements were expressed. [This does not represent a complete list of all possible hazards as some characteristics, such as toxicity whilst burning, were not measured and/or controlled].

FIRE AND COLD SMOKE CONTAINMENT AIR TRANSFER GRILLE

A device which provides containment of cold smoke by interface with smoke sensors and the building fire alarm and is also activated by a rise in temperature of the air stream to further contain fire.

FIRE AND SMOKE DAMPER

A device that when activated either by interface with smoke sensors and fire alarm panel or by a rise in temperature of the air stream in a ventilation duct, will close, thus preventing the spread of cold smoke, flame and hot smoke beyond the fire compartment boundary through which a ventilation duct is passing.

FIRE CONTAINMENT AIR TRANSFER GRILL

A device that when activated by a rise in temperature of the air stream provides containment of fire and hot gases in addition to the normal function of an air transfer grille **but is not intended to control cold smoke.**

FIRE CURTAIN

A flexible, fixed or retractable fabric curtain that can restrict the spread of fire by satisfying the integrity criteria of EN 1363-1 for an appropriate period.

FIRE DAMPER

A damper that is installed within air transfer ductwork (either within the duct or at an entry point into the duct) which is to prevent the passage or the ingress of fire; i.e. flames and hot gases. Such dampers normally consist of sprung loaded metal blades that are operated by the melting of a fusible link.

FIRE DAMPER

A device that when activated by a rise in temperature of the air stream in a ventilation duct will close, thus preventing the spread of flame and hot smoke beyond the fire compartment boundary through which, the duct is passing **but is not intended to control hot smoke**.

FIRE RESISTING AIR TRANSFER GRILLE

A grille that is installed in the fire separating element (including a fire resisting door) for the purpose of controlling the flow of air in normal ambient conditions, but which is closed-off in the event of a fire by the activation of intumescent materials.

FIRE RESISTING DUCTWORK

Ductwork that is designed to carry hot combustion gases, normally to exhaust them outside of the building, without reducing in cross-sectional area, collapsing or getting excessively hot on the outside surfaces.

FIRE RISK ASSESSMENT (FRA)

A process whereby the hazard to life safety of a material, product, process or construction(al) form in the event of a fire is establishing using quantitative and/or qualitative methods carried out by suitably qualified person(s). This is a procedure that is an integral part of the Regulatory Reform (Fire Safety) Order which is a mandatory requirement for all buildings, or parts thereof, to which the public are allowed to access.*[Note: the purpose of a fire risk assessment is not to establish whether a*

building meets the Regulatory guidance/regulations as this does not ensure that persons will not suffer injury or death in the event of a fire.

FIRE SAFETY ENGINEER

A qualified person with special knowledge of the fire behaviour of materials or structures and fire dynamic and who is preferably a chartered engineer or a corporate member of a fire related professional body, e.g. Institute of Fire Engineers.

FIRE SEAL

A seal designed to prevent the passage of fire, smoke and hot gases.

FIRE SEPARATING ELEMENT

A floor, wall or other separating element of construction required to provide a period of fire resistance in order to achieve a fire containment function as prescribed in regulations, codes or a fire safety strategy and which is determined in accordance with one of the BS EN 1363 parts, e.g. BS EN 1366: part 1 or Part 3); BS 476: Part 20 series and/or ISO 834.

FIRE STOPPING

This is generally a deprecated term, but when used it should be used to describe a seal provided to close-off an imperfection of fit or a design tolerance between the elements or components, excluding functional gaps, to restrict the passage of fire and smoke.

FUNCTIONAL LINEAR GAP

A gap of the dimensions given in the definition of a linear gap, but which is installed in an element or building for a specific purpose, e.g. a movement joint, rather than an imperfection of fit.

GENERIC PRODUCTS

A term used to describe products, in this context products used for fire protection purposes, by their general composition rather than by a specific proprietary formulation and in particular the materials referred to in the England and Wales Approved Document B to regulation B3 for use in the sealing of gaps to maintain compartmentation.

hEN

Harmonised European Product Standard.

INTUMESCENT FIRE DAMPER

A fire damper that is installed within air transfer ducts which restricts the passage of, or the ingress of hot fire gases as in 'Fire Damper', but where the flow of the products of construction is prevented by the activation of intumescent materials.

INTUMESCENT MASTIC

An alternative, non-preferred, term for a gunnable intumescent sealant.

INTUMESCENT SEALANT

A sealant that retains a degree of flexibility after curing and which contains materials that expand on heating to produce a seal which resists the action of fire.

INTUMESCENT

A term describing the phenomenon of expansion considerably in excess of normal thermal expansion under the action of heat, normally generated by fire.

LINEAR GAP SEAL

A seal used to maintain the fire resistance of the elements bounding a linear gap.

LINEAR GAP

At gap with a length of at least 10 times its width and where gap width does not exceed 150mm.

NEUTRAL PRESSURE AXIS

A height above floor level established as a result of the air and hot gases in a room becoming buoyant as a result of a fire and above which the gases exhibit a positive pressure when compared with the ambient pressure and below which the pressure is negative compared with ambient.

NON-SERVICE PENETRATION

An aperture in an element which is not penetrated by a service.

NOTIFIED BODY

A body empowered by the European Commission to issue/apply the CE mark to products which satisfy the appropriate Essential Requirements for the product when used in Construction Works (Buildings).

PARTIAL PENETRATION

A situation where only one lining of an element consisting of two or more linings, e.g. ceiling and floor member, is penetrated by an aperture or a service which needs to be sealed to prevent the passage of fire (and smoke) into the void between the linings.

PERIMETER FIRE SEAL

A seal that is installed in the gap between a concrete fire resisting floor slab and the external skin of the building, even when the façade does not have, or need any fire resistance rating, for the purpose of preventing the vertical flow of smoke and hot gases to the floor above.

PIPE CLOSER DEVICE

A pre-fabricated heat activated device which, under fire exposure, acts to crush plastic pipes or ducts which pass through vertical or horizontal separating elements. The device normally consists of a metal canister containing pressure producing intumescent material.

REGULATORY REFORM (FIRE SAFETY) ORDER (RRO)

A new approach to fire safety legislation replacing the Fire Precautions Act: 1971 in 2006, removing the responsibility for maintaining fire safety in buildings from the fire service and passing it onto the building owner (Responsible Person). This is an on-going process and is not an annual, bi-annual, or other fixed duration process.

SEAL

A physical barrier introduced to prevent the passage of air, water, fire, etc.

SEALANT

A sealing medium which is applied in a form which cures after application to form either a rigid or, more commonly, an elastomeric sealant. Sealants may be applied by a gun or trowel.

SEALING COMPOUND

A gunnable or trowellable material that sets rigid after curing and which contains materials that are able to expand on heating to produce a seal able to resist the action of fire.

SERVICE DUCT

A duct that is installed in buildings to carry cables and/or pipes rather than for the passage of air.

SERVICE PENETRATION – LARGE

A penetration, with single or multiple services passing through it, where the void between the services and the associated construction is sufficiently large that it cannot be filled with a single material and where the bulk of the aperture is filled by a bulkhead fire barrier.

SERVICE PENETRATION – SMALL

A penetration with either a single service, i.e. a cable or pipe, or a small number of services passing through it where the void between the service(s) and the associated construction can be filled solely by a suitable sealing material.

SINGLE BURNING ITEM (SBI)

The Single Burning Item test procedure; BS EN 13823:2010, is the primary European test procedure that is used for establishing the reaction to fire properties of the materials used in the construction of a product. From this test, materials can be graded against the European Classification system based upon EN13501; Part 1:2007 + A1:2009.

SMOKE [CONTAINING] BARRIER

A flexible retractable fabric curtain that is able to restrict the flow of smoke in a similar manner to a smoke control door assembly when evaluated in accordance with the method and criteria of EN 1634-3 or ISO 5925-1:2007.

SMOKE [CONTROL] CURTAIN

The popular name for a flexible curtain that can be fixed in place or be retractable, which satisfied the performance requirements of EN 12101-Part 1 as being capable of restricting, or channelling, the direction of smoke movement as part of a smoke control system.

SMOKE CONTROL DAMPER

A device that may be normally open or closed and is designed to allow smoke to be extracted or constrained through a range of temperatures up to 600^{o}C.

STANDARD SUPPORTING CONSTRUCTION

The construction(s) adjacent to a linear gap seal, penetration seal or fire barrier used during a fire resistance test to create a boundary to the aperture. The standard supporting construction is used when the end use of the product is not known. The selection of the supporting construction should be made to produce the maximum field of application for the tested product.

TRANSIT SYSTEM

A pre-fabricated construction often, but not exclusively, consisting of a steel frame containing fire resistant materials, often fitted in modules, through which cables or similar services pass and which is either cast into or bolted onto the fire separating element.

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SOME COMMON ABBREVIATIONS USED IN THE FIELD OF STANDARDS AND CODES

CEN – Comité Européen de Normalisation
European Standards body

CENELEC (CLC) Comité Européen de Normalisation Electrotechnique
European body for electrotechnical standardisation

DC Draft for Comment
Used in CENELEC and IEC

DIS Draft International Standard
Stage in the development of an ISO Standard, equivalent to ENQ or CDV, in which a draft is made available for an extended comment period and which attracts a vote from each P=member

DPC Draft for Public Comment
Stage in the development of a Standard of UK origin in which a draft is made available to the public for an extended comment period

FDIS Final Draft International Standard
Final voting stage in the development of ISO/IEC Standards, equivalent to FprEN or FV

ISO International Organisation for Standardisation
Body responsible for international i.e. worldwide, standardisation

PAS Publically Available Specification
A sponsored fast-track standard driven by the needs of the client organisations and developed according to guidelines set out by BSI

prEN
Stage in the development of European Standard, equivalent to DIS or CDV, in which a draft is made available for an extended comment period and which attracts a vote from each P-member. Also known as ENQ

TC Technical Committee

TR Technical Report
Document containing informative material not suitable to be published as a Standard or Technical Specification

TS Technical Specification
Document for which there is the future possibility of agreement on a Standard, but for which are present:

- the required support for approval as a Standard cannot be obtain
- there is doubt on whether consensus has been achieved
- the subject matter is still under technical development, or
- there is another reason precluding immediate publication as a Standard

UAP Unique Acceptance Procedure
Procedure applied to any type of document, whatever its origin, in order to achieve rapid approval of a European Standard, for which there is an expectation to be acceptable at European level with no, or only minor, change