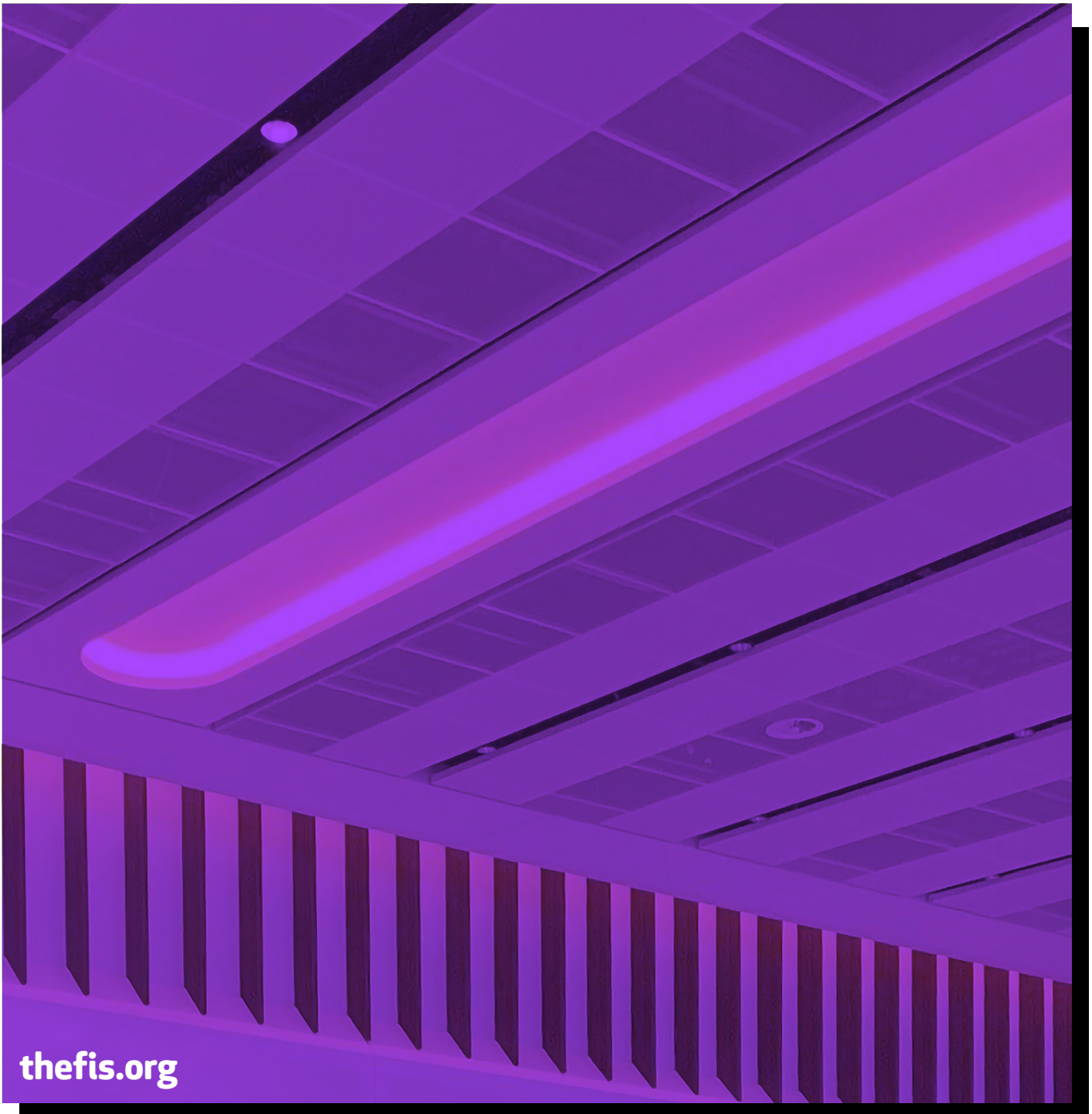




FINISHES & INTERIORS SECTOR

STANDARDS GUIDANCE DOCUMENT

BS EN 13964 - SUSPENDED CEILINGS, REQUIREMENTS AND TEST METHODS



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FINISHES & INTERIORS SECTOR

GUIDANCE DOCUMENT

BS EN 13964 - SUSPENDED CEILINGS, REQUIREMENTS AND TEST METHODS

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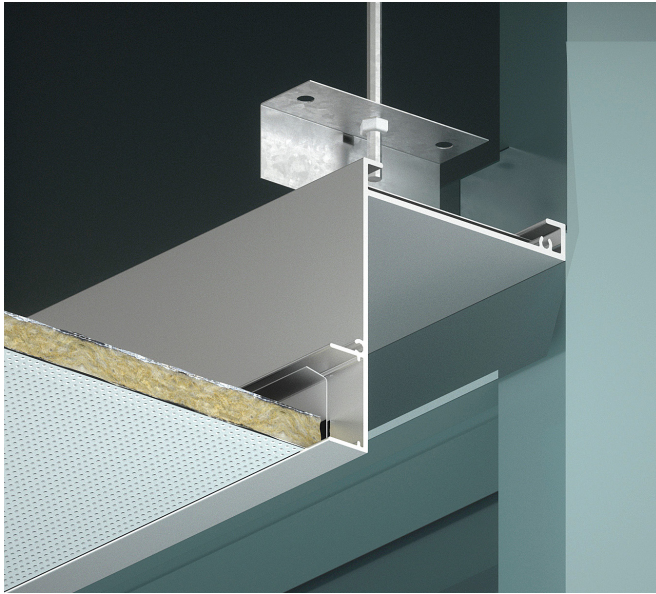
UK Building Regulations

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Other documents

Additional reading (not referenced)

INTRODUCTION



BS EN 13964 was last revised in 2014 and has 'designated' status meaning that the products it covers should carry conformity marking and a declaration of performance.

It is and should continue to be used to assist design and be cited in any specification clause for a described suspended ceiling type.

For general specification advice see **FIS SPECIFIERS' GUIDE TO CEILINGS AND ACOUSTIC ABSORBERS**

[the fis.org/membership-hub/publications/specifiers-guides/ceilingsandacousticabsorbers/](https://www.thefis.org/membership-hub/publications/specifiers-guides/ceilingsandacousticabsorbers/)



Note: BS EN 13964 is an extensive document, and it is still necessary to represent information selectively, so it should be considered typical practice throughout this guidance note that the standard be referred to for comprehensive detail and listings.

The standard can be purchased from the British Standards Institute (BSI) here: [knowledge.bsigroup.com/](https://www.knowledge.bsigroup.com/)

SCOPE

This guide, aimed at specifiers and designers, will give an overview of the content and scope of BS EN 13964.

It will highlight salient information regarding:

- Definitions and the types of products which are and are not covered by this standard
- Types, details and descriptions in the standard and those in the market
- Full product requirements
- Reasonable expectations of manufacture and installation tolerances
- A guide to conformity marking.

This guide will not give any overview of the following parts of BS EN 13964 as these represent detailed guidance specifically for manufacturers:

- Test procedures and associated classification methods (section 5 and annexes C-K)
- Descriptions of methods of attestations of conformity (sections 6-8 and annex L)
- Revision changes (annex M).

DEFINITIONS AND PRODUCT INCLUSION/EXCLUSION

The standard contains an exhaustive list of definitions, but key definitions are given below:

CEILING (3.1.1)

Construction covering the underside of a floor or roof, providing the overhead surface.

SUSPENDED CEILING (3.1.2)

Ceiling (as above) hung by a suspension from or by a directly fixed substructure or perimeter trim to the load bearing structure (floor, roof, beam and walls) at a distance from the floor or roof above.

SUBSTRUCTURE (3.2.1.1)

Suspending frame that supports the ceiling membrane.

SUSPENSION COMPONENT (3.2.1.5)

Part of the substructure, connecting it to the load bearing structure.

TOP FIXING (3.2.2.1)

Fixing which connects the suspension components or the substructure directly to the load bearing structure.

SUPPORTING MEMBER (3.2.2.4)

Suspended component of the substructure with direct connection to the suspension component or directly fixed component.

PERIMETER TRIM (3.2.2.6)

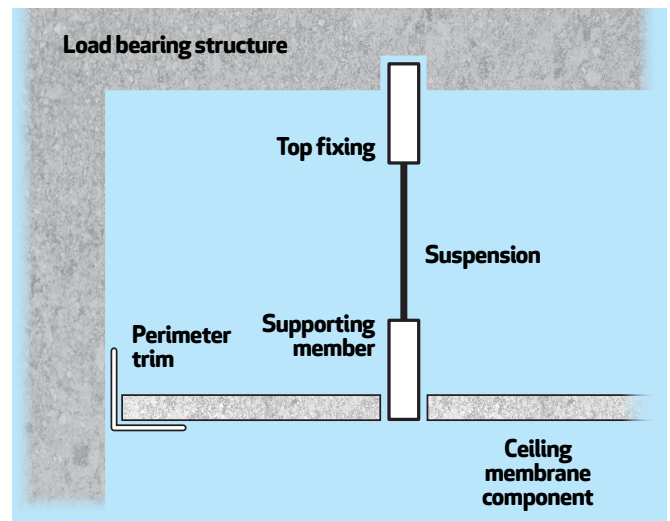
Section fixed at the perimeter of the ceiling to support the components of either the substructure or the ceiling membrane, or both, or fixed to and carried by the ceiling membrane itself.

CEILING MEMBRANE (3.3.1)

Exposed surface of the ceiling facing the room, excluding any exposed substructure.

CEILING MEMBRANE COMPONENT (3.3.2)

Product forming part of the ceiling membrane (eg a tile or plank); the ceiling membrane component can have any form (e.g. solid, open, corrugated, mesh).



Products not explicitly covered by BS EN 13964:

- In-situ formed ceilings where the installer, not the component manufacturer, takes responsibility for ensuring that the complete installed suspended ceiling meets regulatory requirements
- Stretched ceilings covered by BS EN 14716
- Ceilings in mobile buildings and vehicles
- Suspended ceilings used in external environments or subject to water penetration requirements
- Heavy duty (walk-on) ceilings.

Ceiling products that fall under the definitions but are not well described and are therefore not considered to be covered by this standard:

- Non continuous ceiling rafts and horizontal acoustic absorbers are similar to hanging baffles, but the descriptions and test methodologies are not always appropriate
- The internal ceiling of a relocatable partition or furniture pod is not well described by the standard and by virtue of its intended use is not placed on the market as a ceiling product/kit at any time
- Drylining boarded ceilings (with the exception of MF ceiling systems) are covered by BS 8212 and BS 8000-8.

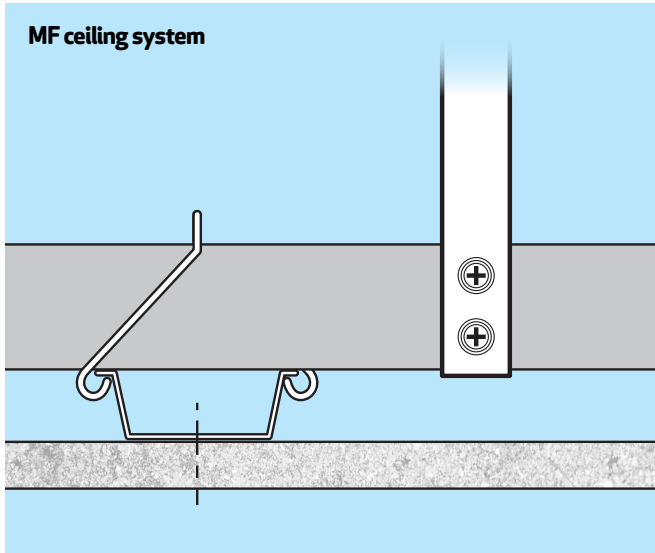
Non-suspended ceilings that are often tested and developed in accordance with BS EN 13964:

- Some internal wall cladding products and acoustic absorbers are developed, tested and placed on the market by ceiling manufacturers and the reaction to fire, acoustic classification and many other attributes including substructure components are identical to those in BS EN 13964.

TYPES, DETAILS AND DESCRIPTIONS

TYPES OF CEILING DESCRIBED BY BS EN 13964

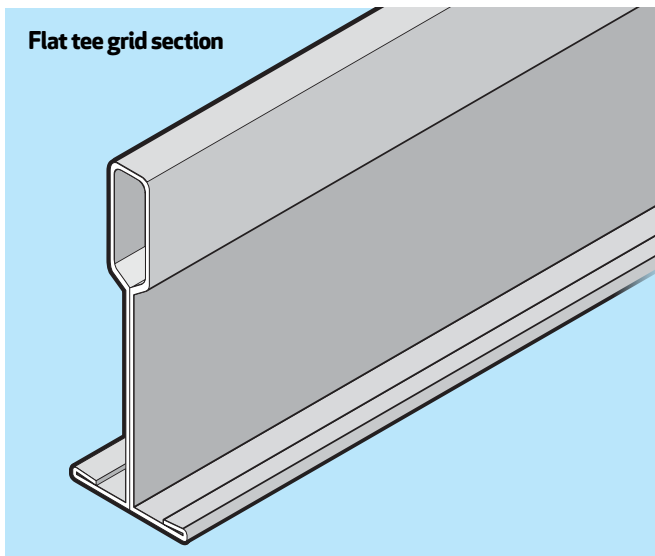
SUSPENDED CEILING SYSTEMS WITH MEMBRANE COMPONENTS FIXED ON THE SUBSTRUCTURE



Metal furring (MF) ceilings are the most common example of this type which provide a near monolithic finish, using boards jointed and finished prior to decoration.

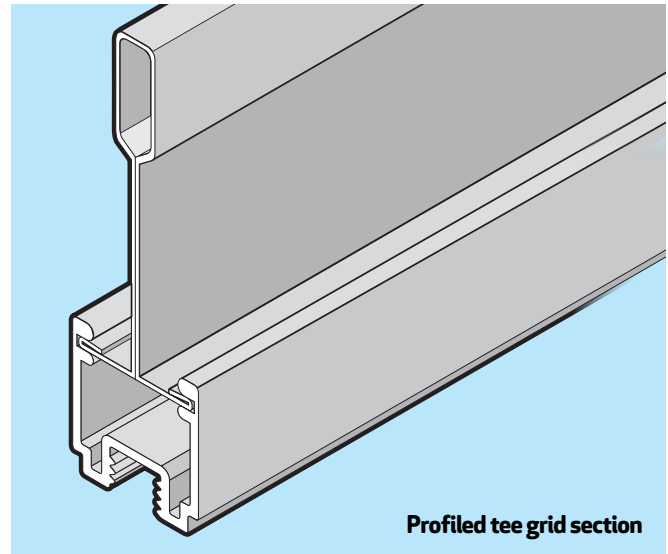
They can provide good levels of sound insulation and/or absorption with the specification of specialist plasters and boards with sound absorbent properties.

LAY-IN SUSPENDED CEILING SYSTEM



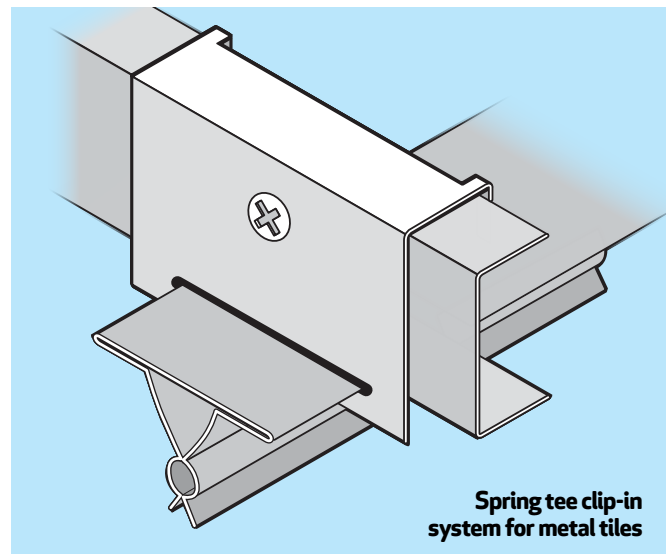
Usually an inverted tee system with a visible width of 24mm or 15mm based on either 600x600mm or 1200x600mm modules.

REBATED LAY-IN SUSPENDED CEILING SYSTEM



As a regular lay-in system but with rebated tile edges that either enclose a profiled grid or finish below the grid line.

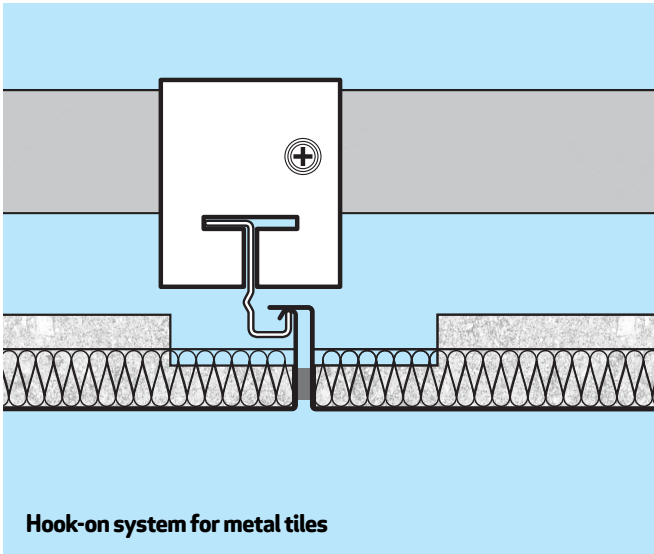
CLIP-IN SUSPENDED CEILING SYSTEM



These ceilings usually incorporating individual tiles onto a concealed grid, where tiles are secured to the grid via a clip securing arrangement. These are often specified in high traffic areas, where additional security to the ceiling void is required, to limit access and for increased security of MEP services.

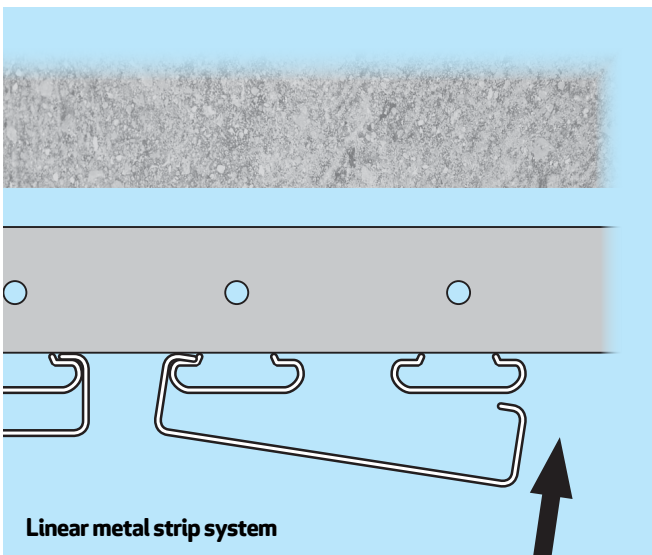
TYPES, DETAILS AND DESCRIPTIONS

HOOK-ON SUSPENDED CEILING SYSTEM



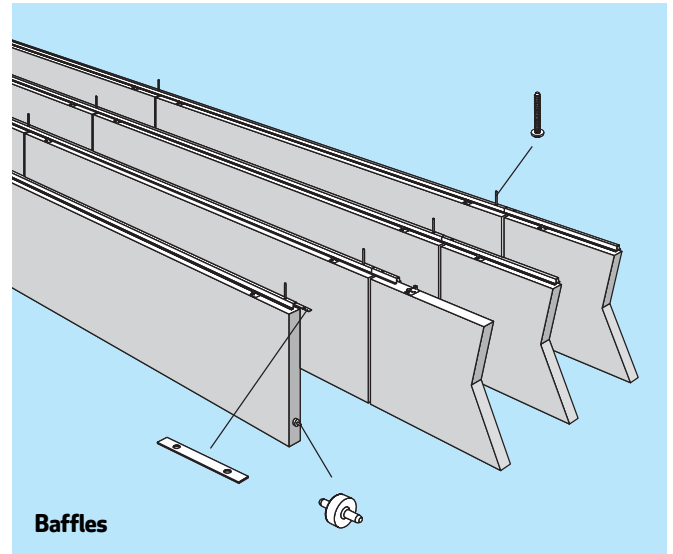
These are constructions utilising a hook and rail arrangement, allowing a concealed substructure and uniform ceiling surface. These are often specified to create a seamless ceiling surface, whilst allowing easy access into the ceiling void.

LINEAR SUSPENDED CEILING SYSTEM



These systems comprise baffle type 'blades' or 'rafts', supported by a suspension system. Linear baffle systems create an open-type ceiling construction, where the ceiling void is not completely sealed off and therefore can be useful in providing access to MEP installation for maintenance, whilst aesthetically masking these.

BAFFLES

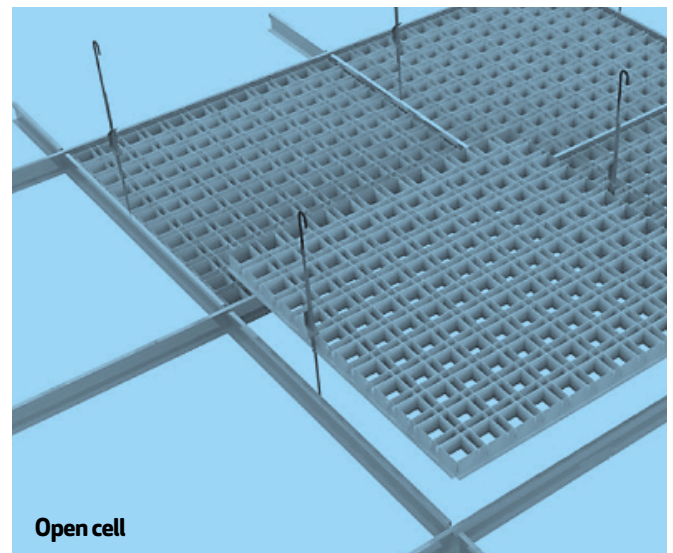


These can either be fixed directly to the soffit or suspended by appropriate hangers to a required level. When installed below a suspended ceiling it is necessary to check if the suspended ceiling system and its suspension system are capable of taking the extra load imposed by the acoustic baffles and whether it can provide adequate fixing points to suspend the baffles from.

Refer to The FIS publication 'A Guide to Office Acoustics' for further information on baffles and other acoustic solutions.

thefis.org/membership-hub/publications/guide-office-acoustics/

OPEN CELL

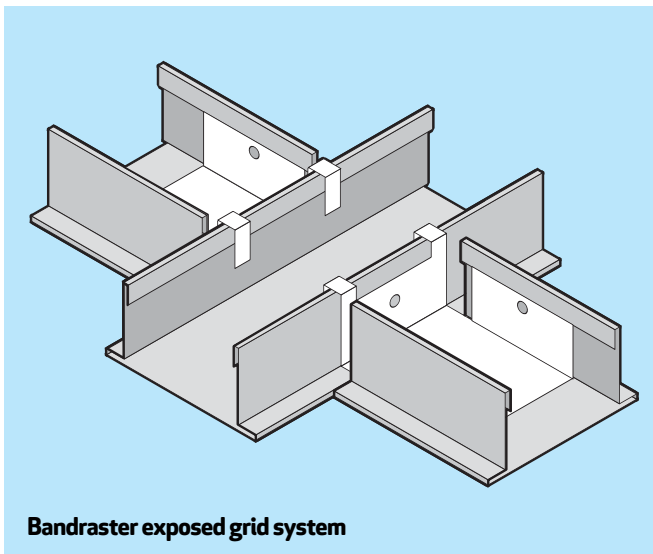


TYPES, DETAILS AND DESCRIPTIONS

Although these ceilings can provide a visually continuous appearance, they can also be used to provide a varying level of acoustic absorption, as well as allow air flow into the void.

Depending on the specific requirements, this can make them suitable for use in thermal mass projects, as well as large public areas such as shopping complexes and airports, and are aesthetically appealing.

Available in metal, high-density mineral wool, GRG etc.



FULL REQUIREMENTS AND GUIDANCE

The full list of possible product requirements for ceilings as prescribed by BS EN 13964 is covered in Section 4 of the standard.

The requirements are presented in text form in the standard and have been summarised in the table across with highly condensed comments

regarding guidance for demonstrating the characteristics and whether they relate internally to BS EN 13964 or another referenced standard.

The standard should be consulted for more detailed descriptions of each requirement and how to meet them.

| | | Suspended ceiling kits | Substructure kits | Substructure components | Membrane components | | | | | |
|---|---|--------------------------------------|----------------------------------|-------------------------|---------------------|-----------------------------|--|--|-----------------------------------|---|
| Clause/requirement | | SC K | SS K | SS C | M C | Guidance within BS EN 13964 | And/or | External guidance | | |
| 4.1 Dimensions and tolerances | | ✓ | | ✓ | ✓ | As per tables 1-5 | | | | |
| 4.2 Modular dimensions | | ✓ | ✓ | ✓ | | As per table 2 | or | As per ISO 21723 | | |
| 4.3 Mechanical resistance and stability of load bearing components | 4.3.1 General | | ✓ | | | | | | | |
| | 4.3.2 Substructure | 4.3.2.1 Load bearing performance | ✓ | ✓ | ✓ | | By calculation or test as per clause 5 and classify as per table 6 | | | |
| | | 4.3.2.2 Substructure materials | 4.3.2.2.1 Steel substructure | ✓ | ✓ | ✓ | | Corrosion protection as per tables 8 and 9 | and | Thickness tolerance as per EN 10143 Material as per EN 10346, EN 10152, EN 10169 or EN 10346 |
| | | | 4.3.2.2.2 Aluminium substructure | ✓ | ✓ | ✓ | | Corrosion protection as per table 9 | and | Material as per EN 573-3 with 0.2% yield strength of at least 160N/mm ² |
| | | | 4.3.2.2.3 Timber substructure | ✓ | ✓ | ✓ | | Refer to clause text | and | Material to quality grade S10 (MS10) of EN 1912 Preservation as per EN 335, EN 350, EN 351, EN 460 and/or EN 599 |
| | 4.3.3 Suspension components and fasteners | 4.3.3.1 Metal suspension components | ✓ | ✓ | ✓ | | By calculation or test as per clause 5.3 | | | |
| | | 4.3.3.2 Timber suspension components | ✓ | ✓ | ✓ | | Refer to clause text | or | Calculated as per EN 1995-1-1 | |
| | 4.3.4 Resistance to fixings | | ✓ | ✓ | ✓ | ✓ | Withstand loads as per clause 5.3 | | | |
| | 4.3.5 Wind load resistance | | ✓ | | | | Refer to clause and annex C | or | Calculated as per EN 1991-1-4 | |
| | 4.3.6 Impact resistance | | ✓ | | | ✓ | Test as per annex D | | | |
| | 4.3.7 Seismic resistance | | ✓ | | | | No damage or collapse | and | Refer to EN 1998-1 where relevant | |

Continued >

FULL REQUIREMENTS AND GUIDANCE

Continued >

Suspended ceiling kits

Substructure kits

Substructure components

Membrane components

| Clause/requirement | | | SC K | SS K | SS C | M C | Guidance within BS EN 13964 | And/ or | External guidance |
|--|---|--|---------|---------|---------|--------|---|------------|---|
| 4.4 Safety in case of fire | 4.4.1 Fire resistance | 4.4.1.1 General | ✓ | | | | | | Classification as per EN 13501-2 |
| | | 4.4.1.2 Test specimen preparation | | | | | | | Observe EN 13501-2 |
| | | 4.4.1.3 Testing and classification | | | | | | | Test as per EN 1364-2 and/or as appropriate |
| | 4.4.2 Reaction to fire | 4.4.2.1 General | ✓ | | | | Classification without testing as per annex K | or | Testing and classification as per EN 13501-1 |
| | | 4.4.2.2 Membrane components | | | | ✓ | Refer to clause text | | |
| | | 4.4.2.3 Substructure kits and components | | ✓ | ✓ | | Observe annex I | and | Test according to EN 13823 and/or EN ISO 11925-2 as appropriate |
| | | 4.4.2.4 Jointing products | ✓ | | | | Classification without testing as per annex K | or | Testing and classification as per EN 13501-1 |
| 4.5 Hygiene health and environment - toxic gases and dangerous substances | 4.5.1 Release of asbestos (content) | | ✓ | | | ✓ | None permissible | | |
| | 4.5.2 Release and/or content of formaldehyde | | ✓ | | | ✓ | Class E1 or E2 as per annex E as appropriate | | |
| | 4.5.3 Other dangerous substances | | ✓ | | | ✓ | | | Consider national provisions |
| | 4.5.4 Susceptibility to the growth of harmful micro-organisms | | ✓ | | | ✓ | Declare susceptibility as per table 7 | | |
| 4.6 Safety in use | 4.6.1 Shatter properties | | ✓ | | | ✓ | | | Classification as per EN 12600 as appropriate |
| | 4.6.2 Flexural tensile strength | | ✓ | | | ✓ | Test as per annex F Classification as per tables 8 and F.2 | | |
| | 4.6.3 Mechanical strength safety against failure - baffles | | ✓ | | | | Test and declare as per annex J | | |
| | 4.6.4 Electrical safety | | ✓ | ✓ | | | Refer to clause text | | |

Continued >

FULL REQUIREMENTS AND GUIDANCE

Continued >

| | | | |
|------------------------|-------------------|-------------------------|---------------------|
| Suspended ceiling kits | Substructure kits | Substructure components | Membrane components |
|------------------------|-------------------|-------------------------|---------------------|

| Clause/requirement | | SC K | SS K | SS C | M C | Guidance within BS EN 13964 | And/or | External guidance | |
|-----------------------------------|---|--|------|------|----------------------|-------------------------------------|--------|--|--|
| 4.7 Acoustics | 4.7.1 Test specimen preparation | | | | | | | | |
| | 4.7.2 Sound absorption | ✓ | | | ✓ | | | Absorption coefficient established as per EN ISO 354 and calculated and expressed as per EN ISO 11654 | |
| | 4.7.3 Sound insulation | 4.7.3.1 General | ✓ | | | | | | |
| | | 4.7.3.2 Laboratory measurement of vertical sound reduction | ✓ | | | | | | Test as per EN ISO 10140 and declare as per EN ISO 717-1 |
| | | 4.7.3.3 Laboratory measurement of horizontal transmission | ✓ | | | | | | Test as per EN ISO 10848-2 and declare as per EN ISO 717-1 |
| 4.7.4 Direct field of application | | | | | Refer to clause text | | | | |
| 4.8 Durability | 4.8.1 General | ✓ | ✓ | ✓ | ✓ | Declare exposure class from table 8 | | | |
| | 4.8.2 Dampness | ✓ | ✓ | ✓ | ✓ | Corrosion protection as per table 9 | and | Calculations as per EN ISO 6946 and EN ISO 10211 | |
| | 4.8.3 Service life requirements | ✓ | ✓ | ✓ | ✓ | Refer to clause text | | | |
| | 4.8.4 Classification of ceiling exposure conditions | ✓ | ✓ | ✓ | ✓ | Classification as per table 8 | | | |
| | 4.8.5 Corrosion protection | ✓ | ✓ | ✓ | ✓ | Corrosion protection as per table 9 | | | |
| | 4.8.6 Contact corrosion protection | ✓ | ✓ | ✓ | ✓ | | | Observe EN ISO 12944-3 as appropriate | |
| | 4.8.7 Durability of non-cellular PVC profiles | ✓ | ✓ | ✓ | ✓ | | | PVC-U at 23°C as per EN 13245-1 annex A and table 2 PVC-UE at 23°C as per EN 13245-2 annex B and table B.1 | |
| | 4.8.8 Durability of wooden products | ✓ | ✓ | ✓ | ✓ | | | Hazard class as per EN 355 or preservation treatment as per EN 350, EN 351 and EN 460 Mechanical durability calculated as per EN 1995-1-1 | |

Continued >

FULL REQUIREMENTS AND GUIDANCE

Continued >

Suspended ceiling kits

Substructure kits

Substructure components

Membrane components

| Clause/requirement | | SC K | SS K | SS C | M C | Guidance within BS EN 13964 | And/or | External guidance |
|--|--|------|------|------|-----|--|--------|--|
| 4.9 Colour, light reflectance and gloss factor for suspended ceiling components | 4.9.1 General | | | ✓ | ✓ | Declare as per clauses 4.9.2, 4.9.3 and 4.9.4 as appropriate | | |
| | 4.9.2 Measurement method of colour composition | | | ✓ | ✓ | | | As per CIE-Lab method in ISO 7724-2 and ISO 7724-3 |
| | 4.9.3 Measurement method for light reflectance | | | ✓ | ✓ | | | As per CIE-Lab method in ISO 7724-2 and ISO 7724-3 |
| | 4.9.4 Measurement and value of gloss factor | | | ✓ | ✓ | | | Determined and classified as per EN ISO 2813 |
| 4.10 Thermal insulation | | ✓ | | | ✓ | | | Calculated as per EN ISO 6946 and EN ISO 10211 |

TOLERANCES, INSTALLATION AND SELECTION OF FIXINGS

TOLERANCES

Tolerances given in section 4.1 (requirements), generally refer to fine tolerances of manufactured components. These are detailed very comprehensively for both membrane and substructure components and the standard should be referred to for details.

Modular tolerances given in section 4.2 refer to ISO 21723, but a general tolerance is given (in plan) of +/- 0.25mm from axis to axis of grid/substructure components in an assembly.

INSTALLATION-RELATED ANNEX A TOLERANCES

Flatness

The maximum deviation from flatness should be less than or equal to 2mm per metre length, with a maximum of 5mm over a 5m length, measured horizontally at the location of the suspension in any direction (linear interpolation is used to determine the tolerance on shorter lengths). These requirements apply for the installation of the substructure, the membrane components and the edge profiles.

The tolerances of manufactured components cannot be considered cumulative to the general flatness but should be measured separately.

Squareness

The standard states that substructure and linear components should be accurately square and does not give a specific deviation tolerance.

Limitations based upon component tolerances should be considered by the installers.

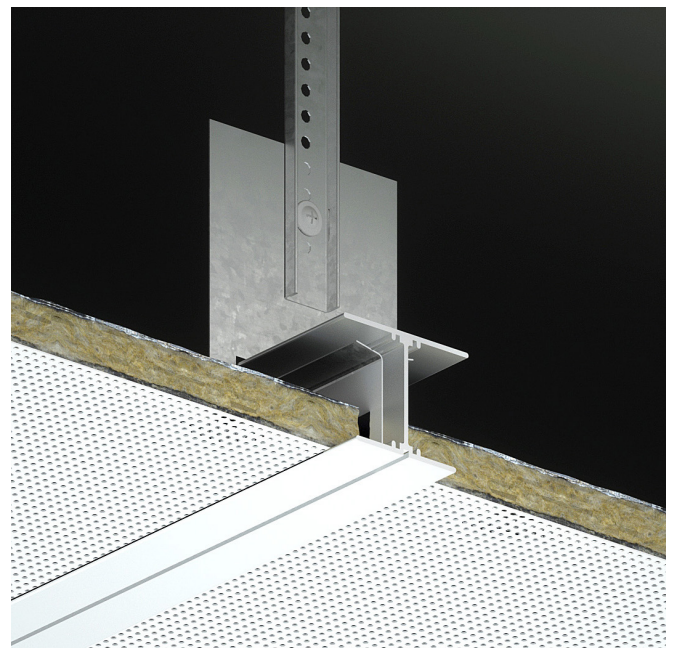
Alignment of linear components

Linear components, together with any elements and carriers, should be exactly aligned on module. Special care should be taken of the alignment of modules over the joint between carriers.

Cut to size membrane components

As a general requirement, membrane components are divided from the middle of the ceiling area, be it from the middle of the component or the middle of

a joint between components, in such a way that adapter panels have a minimum width of half the width (or length) of the standard panel. Otherwise, the division should be determined with the building designer, taking into account the location of columns, lighting fixtures, etc. Cut to size membrane components, when pushed against the body of the T-profile, should be supported by the edge profile on the opposite side by at least 10mm.



INSTALLATION AND SELECTION OF FIXINGS

BS EN 13964 states clearly in Annex A that fixings should be specified at design stage and should be detailed on relevant drawings.

ANNEX B SELECTION FACTORS

Type of suspension component

Wire, rod strap etc. and the compatibility of the fixing with the medium.

Base material of load bearing structure - Nature, strength and thickness

Load capacity, thickness, compressive strength and consideration of deterioration over time of the base material, and the compatibility of the fixing with the medium.

TOLERANCES, INSTALLATION AND SELECTION OF FIXINGS

Design resistance

Consideration of the nature of the design and how it can impact the previous factors.

Overview advice for base materials

- Concrete, including:
 - Normal weight – cracked and non-cracked
 - Hollow core slabs (EN 1168)
 - Lightweight aggregate concrete (EN 1520)
 - Aerated concrete (EN 12602)
- Timber
- Metal decking and structural steel sections.

Note: ETAG 001 and 020 are referenced throughout this section, but both have since been superseded as follows:

- ETAG 001 replaced by EAD 330232-00-0601
- ETAG 020 replaced by EAD 330284-00-0604.

FIS has published comprehensive information that deals with these subjects in a more prescriptive manner than BS EN 13964.

FIS BEST PRACTICE GUIDE : INSTALLATION OF SUSPENDED CEILINGS

thefis.org/membership-hub/publications/best-practice-guides/installation-of-suspended-ceilings/



FIS BEST PRACTICE GUIDE: SELECTION AND INSTALLATION OF TOP FIXINGS FOR SUSPENDED CEILINGS

thefis.org/membership-hub/publications/best-practice-guides/top-fixings-and-suspended-ceilings/



CONFORMITY MARKING

OVERVIEW

The designated status of BS EN 13964 means that products covered by the standard are mandated by the EU construction products regulation (CPR) 2011 to carry CE marking and a declaration of performance (DOP) in order to be placed on the market.

Further to this, the 2020 UK amendment to the CPR states:

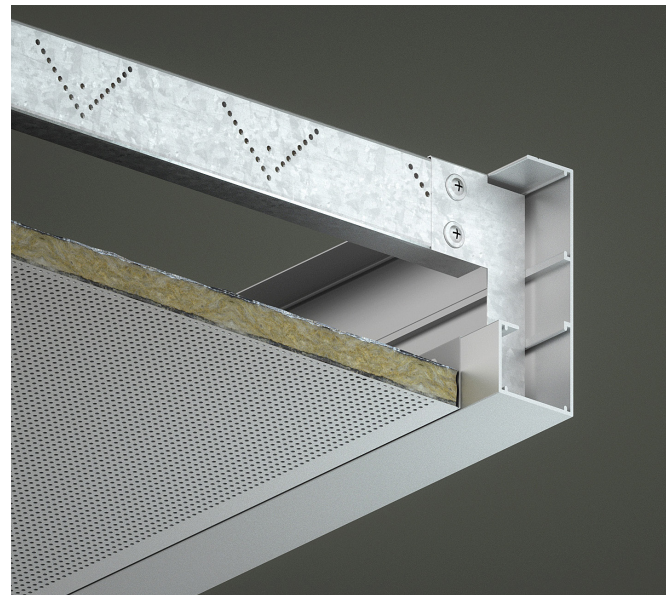
“4.— (1) A person who supplies a construction product in respect of Great Britain that is covered by a designated standard or conforms to a UK Technical Assessment that has been issued for it shall be guilty of an offence unless—

- (a) there is supplied with the product in accordance with Article 7 of the 2011 Regulation a declaration of performance for the product drawn up in accordance with Articles 4 and 6 of the 2011 Regulation; and
- (b) the product has affixed to it the UK marking in accordance with Article 8(1) of the 2011 Regulation.”

After 1 January 2023, CE marking will be superseded by the UK CA mark.

CE or UKCA marking will not necessarily be applied directly to products, so will instead be on packaging and in O&M manuals.

The table shows what conformity marking is and will be accepted between the UK, Northern Ireland and European Union member states.



A declaration of performance is document with specific utility that details compliance with, or levels of performance against the required essential characteristics, and is used for record keeping. It will be provided as part of an O&M manual but should be available to view in advance for any product that has been placed on the market.

An example of a declaration of performance layout can be found in the appendix.

Annex Z of BS EN 13964 covers in detail all the requirements and methods for conformity marking and declarations of performance.

Conformity marking between the UK, Northern Ireland and European Union

| LOCATION OF MARKET | PLACE OF MANUFACTURE | | |
|-------------------------|---|---|--|
| | Great Britain | Northern Ireland | European Union |
| Great Britain >31/12/22 | UK CA or CE | UK CA or CE | UK CA or CE |
| Great Britain 01/01/23> | UK CA | UK CA | UK CA |
| Northern Ireland | CE and UK NI <small>Assessed by UK body</small> | CE and UK NI <small>Assessed by UK body</small> | CE <small>Assessed by EU body</small> |
| European Union | CE | CE | CE |

CONFORMITY MARKING

ESSENTIAL CHARACTERISTICS

This table combines data within Annex ZA.1 to display the essential characteristics for conformity marking, showing how these vary for complete kits and components etc.

| Characteristic | | ZA.1.1 Suspended ceiling kits | ZA.1.2 Substructure kits | ZA.1.3 Substructure components | ZA.1.4 Membrane components | Notes |
|---|---|-------------------------------------|--------------------------------|--------------------------------------|-------------------------------|-------------------------|
| Reaction to fire | | ✓ | ✓ | ✓ | ✓ | According to EN 13501-1 |
| Fire resistance | | ✓ | | | | According to EN 13501-2 |
| Release of asbestos | | ✓ | | | ✓ | Content and/or release |
| Release of formaldehyde | | ✓ | | | ✓ | Classes E1 or E2 |
| Release and/or content of other dangerous substances | | ✓ | | | ✓ | Content and/or release |
| Susceptibility to the growth of harmful micro organisms | as dampness | ✓ | | | ✓ | Levels |
| | through thermal insulation | ✓ | | | ✓ | Levels |
| Shatter properties (safe breakage) | as impact resistance | ✓ | | | ✓ | Levels |
| | as shatter properties | ✓ | | | ✓ | Levels |
| Flexural tensile strength | | ✓ | | | | Levels |
| Bond strength/adhesion as resistance to fixings | | ✓ | | | ✓ ✓ | DoP |
| Load bearing capacity | of substructure | ✓ | ✓ | ✓ | | Levels |
| | of suspension components and fasteners | ✓ | | ✓ | | DoP |
| | of top fixing of suspension components and perimeter trim fixings | ✓ | | ✓ | | DoP |
| | tolerances and dimensions | ✓ | ✓ | ✓ | | DoP |
| Resistance to fixings | | ✓ | ✓ | ✓ | | DoP |
| Electrical safety | | ✓ | ✓ | | | Statement of compliance |
| Direct airborne sound insulation | | ✓ | | | | DoP |
| Sound absorption | | ✓ | | | ✓ | DoP |
| Thermal performances as thermal conductivity | | ✓ | | | ✓ | DoP |
| Durability | | ✓ | ✓ | ✓ | ✓ | Levels |

CONFORMITY MARKING

AVCP SYSTEMS

This table shows how the intended uses of kits or components dictate the assessment and verification of constancy of performance (AVCP) system that needs to be used to declare the levels of performance of characteristics.

The AVCP system dictates the level of involvement from a third party approved body (gov.uk/uk-market-conformity-assessment-bodies) in assessing the following main elements:

- Factory production control (fpc) on the basis of documented, permanent and internal control of production in a factory, in accordance with the relevant harmonised technical specifications

- Initial inspection of the manufacturing plant and of fpc
- Continuous surveillance, assessment and evaluation of fpc
- Determination of product type on the basis of type testing, type calculation, tabulated values or descriptive documentation of the product
- Audit testing of samples taken before placing the product on the market.

The standard covers the differences between AVCP systems in detail, the table in the appendix gives a non-product specific overview of how responsibilities are split between the manufacturer and approved body for each AVCP system.

| | | | |
|--|-------------------------------------|---|---------------------------------------|
| ZA.1.1 Suspended ceiling kits | ZA.1.2 Substructure kits | ZA.1.3 Substructure components | ZA.1.4 Membrane components |
|--|-------------------------------------|---|---------------------------------------|

Annex ZA.2 systems of attestation by type and intended uses

| AVCP | Intended uses | AVCP | Intended uses | AVCP | Intended uses |
|------|--|------|--|------|--|
| 3 | As internal finishes in ceilings used for fire protection of ceilings | 3 | To support internal suspended ceilings subject to safety in use requirements | 3 | To support internal suspended ceilings subject to safety in use requirements |
| 3 | As internal finish in ceilings subject to safety in use requirements | 3 | To support internal suspended ceilings subject to reaction to fire regulations Classes; A1, A2, B, C, D and E | 3 | As internal finish in ceilings subject to requirements against accidental injuries from cutting objects |
| 3 | As internal finishes in ceilings subject to reaction to fire regulations Classes; A1, A2, B, C, D and E | 1 | To support internal suspended ceilings subject to reaction to fire regulations Classes; A1*, A2*, B* and C* | 3 | As internal finishes in ceilings subject to reaction to fire regulations Classes; A1, A2, B, C, D and E |
| 1 | As internal finishes in ceilings subject to reaction to fire regulations Classes; A1*, A2*, B* and C* | 4 | To support internal suspended ceilings subject to reaction to fire regulations Classes; (A1 to E)**; F | 1 | As internal finishes in ceilings subject to reaction to fire regulations Classes; A1*, A2*, B* and C* |
| 4 | As internal finishes in ceilings subject to reaction to fire regulations Classes; (A1 to E)**; F | 4 | To support internal suspended ceilings for all other uses mentioned in the mandate | 4 | As internal finishes in ceilings subject to reaction to fire regulations Classes; (A1 to E)**; F |
| 3 | As internal finishes in ceilings subject to regulations on dangerous substances | | | 3 | As internal finishes in ceilings subject to regulations on dangerous substances |
| 4 | As internal finishes in ceilings for all other uses mentioned in the mandate | | | 4 | As internal finishes in ceilings for all other uses mentioned in the mandate |

* Products/materials for which a clearly identifiable stage in the production process results in an improvement of the reaction to fire classification (eg an addition of fire retardants or a limiting of organic material).

** Products/materials that do not require to be tested for reaction to fire (eg products/materials of Class A1 according to Commission Decision 96/603/EC).

APPENDIX

DECLARATION OF PERFORMANCE

Example layout extracted from Construction Products Association (CPA) Guidance Note on the Construction Products Regulation (see References).

DECLARATION OF PERFORMANCE

No. 001CPR2014-05-14

- 1 Unique identification of the product type:
Positive pressure air/flue terminal with metal flue duct for C62- and C63-type gas appliances
T120-PI-D-Vm-L40045-050
- 2 Intended use or uses:
Convey air combustion and the products of combustion from appliances to the outside atmosphere.
- 3 Manufacturer:
Any Company Ltd, PO Box 21, B-1050 Brussels
- 4 Authorised representative:
[to be given by the manufacturer]
5. System(s) of AVCP
System 2+
- 6a Harmonised standard (if applicable):
EN 14989-1:2009

Notified body(ies): (identification number)
[to be given by the manufacturer]
- 6b European assessment document (if applicable):
[to be given by the manufacturer]

European technical assessment (if applicable):
[to be given by the manufacturer]

Technical assessment body (if applicable):
[to be given by the manufacturer]

Notified body(ies) (if applicable):
[to be given by the manufacturer]

APPENDIX

AVCP SYSTEMS OVERVIEW

Extracted from Construction Products Association (CPA) Guidance Note on the Construction Products Regulation (see References).

| System type | Responsibility | Type of notified body | Tasks |
|-------------|----------------|---|---|
| 1+ | Notified body | Product certification body | Initial inspection of the fpc system Continuous surveillance of the fpc system Determination of product type Audit testing |
| | Manufacturer | | Factory production control and further testing of samples |
| 1 | Notified body | Product certification body | Initial inspection of the fpc system Continuous surveillance of the fpc system Determination of product type |
| | Manufacturer | | Factory production control and further testing of samples |
| 2+ | Notified body | Factory production control certification body | Initial inspection of the fpc system Continuous surveillance of the fpc system |
| | Manufacturer | | Factory production control and further testing of samples Determination of product type |
| 3 | Notified body | Test laboratory | Determination of product type |
| | Manufacturer | | Factory production control |
| 4 | Manufacturer | No independent involvement | Factory production control Determination of product type |

REFERENCES

UK BUILDING REGULATIONS

Approved Document B (fire safety) volume 2: buildings other than dwellings

STANDARDS

BRITISH STANDARDS

BS 8000-8:1994
Workmanship on building sites - Code of practice for plasterboard partitions and dry linings

BS 8212:1995
Code of practice for dry lining and partitioning using gypsum plasterboard

EUROPEAN STANDARDS

BS EN 13964:2014
Suspended ceilings. Requirements and test methods

BS EN 14716:2004
Stretched ceilings. Requirements and test methods

ISO STANDARDS

ISO 21723:2019
Buildings and civil engineering works - Modular coordination - Module

EOTA STANDARDS

ETAG 001 replaced by EAD 330232-00-0601

ETAG 020 replaced by EAD 330284-00-0604

OTHER DOCUMENTS

FIS Specifiers' Guide: Ceilings and Acoustic Absorbers

thefis.org/membership-hub/publications/specifiers-guides/ceilingsandacousticabsorbers/

FIS Best Practice Guide: Selection and Installation of Top Fixings for Suspended Ceilings

thefis.org/membership-hub/publications/best-practice-guides/top-fixings-and-suspended-ceilings/

CPA Guidance Note on the Construction Products Regulation

constructionproducts.org.uk/publications/technical-and-regulatory/guidance-note-on-the-construction-products-regulation/

96/603/EC: Commission Decision of 4 October 1996 establishing the list of products belonging to Classes A 'No contribution to fire' provided for in Decision 94/611/EC implementing Article 20 of Council Directive 89/106/EEC on construction products (text with EEA relevance)

op.europa.eu/en/publication-detail/-/publication/999ef8f3-56e7-4a99-8e20-01f910b77d2e/language-en

ADDITIONAL READING (NOT REFERENCED)

FIS Best Practice Guide: Installation of Suspended Ceilings

thefis.org/membership-hub/publications/best-practice-guides/installation-of-suspended-ceilings/

FIS Best Practice Guide: Maintenance and Access into Suspended Ceilings

thefis.org/membership-hub/publications/best-practice-guides/maintenance-and-access-into-suspended-ceilings/

FIS Site Guide: Suspended Ceilings

thefis.org/membership-hub/publications/site-guides/

FIS Technical Note: Transition Trims

thefis.org/knowledge-hub/technical/fis-technical-notes-industry-alerts/

NOTES



FINISHES & INTERIORS SECTOR

STANDARDS GUIDANCE DOCUMENT

BS EN 13964 - SUSPENDED CEILING, REQUIREMENTS AND TEST METHODS

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