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Construction Product Regulations
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Optical Fibre Cables

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Standards Activities

Member
JTC1 SC25 WG3: Generic Cabling
Leader
JTC1 SC25 WG3 Cabling Implementation Task Group: ISO/IEC 14763-2
JTC1 SC25 WG3 Ad-hoc: Bonding - ISO/IEC 30129
Meeting Secretary
JTC1 SC25 WG3 Ad-hoc: AIM - ISO/IEC 18598

Member
JTC1 SC39 WG1: Resource Efficient Data Centres

Convenor
TC215 WG1: Cabling design
Secretary
TC215 WG2: Cabling installation - QA and installation practices
Member
TC215 WG3: Facilities and infrastructures (data centres)

Member
CEN/CLC/ETSI CG Green Data Centres

Past-Chairman
TCT7: Telecommunications - Installation Requirements
Chairman
TCT7/1: Cabling: Infrastructure design, planning and commissioning
Meeting Secretary
TCT7/2: Cabling; Installation and UK implementation
TCT7/3: Facilities and infrastructures

Fibreoptic Industry Association
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Construction Product Regulation

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REGULATION (EU) No 305/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 9 March 2011

laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC

European Commission

ENTERPRISE AND INDUSTRY

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Construction Products Regulation

Construction Products Regulation (the CPR) is to ensure reliable information on construction products in relation to their performances. This is achieved by providing a "common technical language", offering uniform assessment methods of the performance of construction products.

These methods have been compiled in harmonised European standards (hEN) and European Assessment Documents (EAD). This common technical language is to be applied by:

- **the manufacturers** when declaring the performance of their products, but also by
- **the authorities of Member States** when specifying requirements for them, and by
- **their users** (architects, engineers, constructors...) when choosing the products most suitable for their intended use in construction works.

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CPR and Power/Communications Cables

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Discussions surrounding the incorporation of communications cables under the EU Construction Products Directive began almost twenty years ago.

Since that time the Construction Products Directive has become the Construction Products Regulation (2011)

The extension of the CPR to power and communications cables (both metallic and optical) is expected to be implemented early in 2015.

The whole process of certification and labelling is defined in the harmonised standard hEN 50575 which has first to be approved by member states and then accepted by the European Commission at one of their bi-annual meetings (and expected to be at their meeting in December 2014).

hEN 50575 can be regarded to be the "ignition key" for the entire process of extension of power and communications cables under the CPR. **Vote: 4th July**

"Phase 1" Reaction to Fire	ExAp rules Reaction to Fire	"Phase 2" Resistance to Fire
EuroClass defined in [BS] EN 13501-6:2014	CLC TS 50576:2014 only for power cables **Vote: 18th July**	Applicable to "alarm cables" - no definitive action yet

From the date at which that extension is confirmed, the suppliers of cables intended for installation inside buildings and other structures will have 12 months to obtain, for each product, certification of a given fire performance (termed EuroClass) in order to enable those products to be shipped across the borders of the countries of the European Union.

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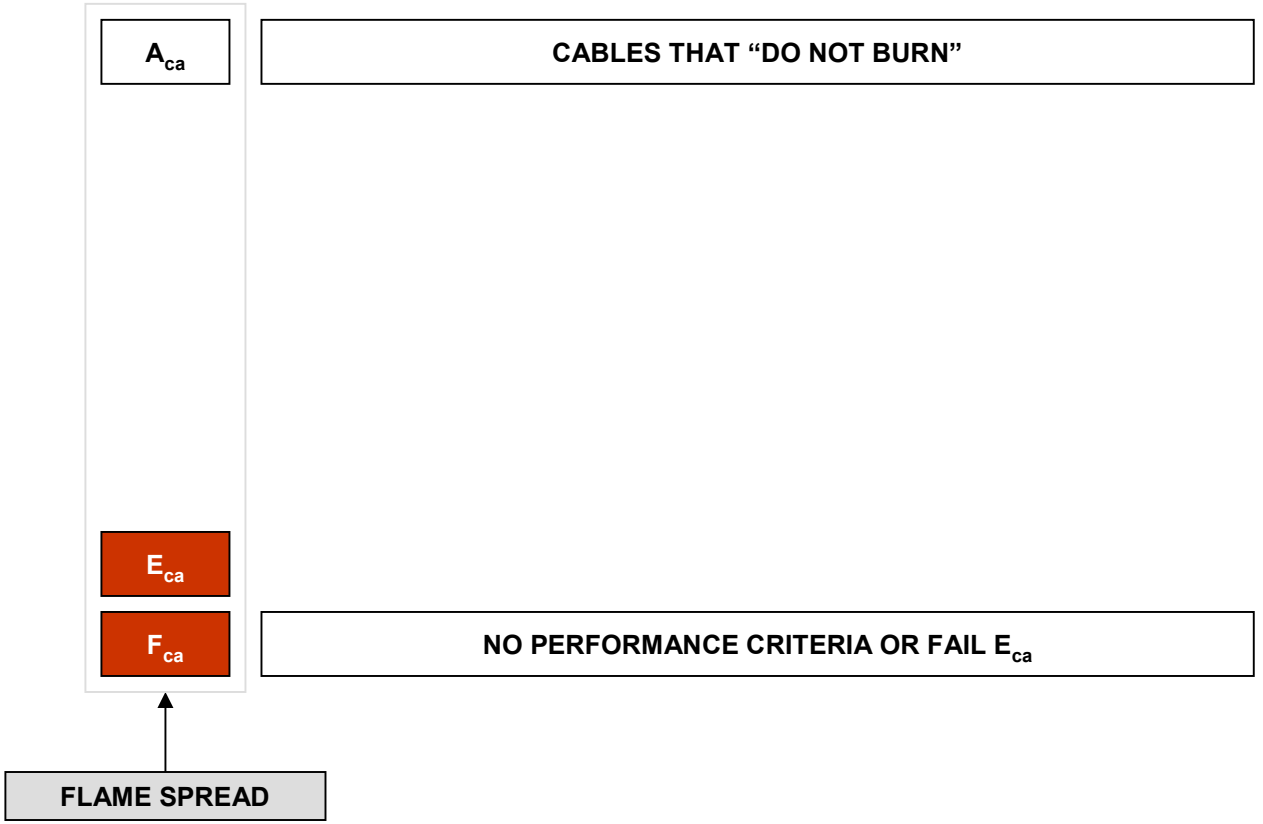
EuroClass System - Cables

[BS] EN 13501-6:2014: Fire classification of construction products and building elements Part 6: Classification using data from reaction to fire tests on electric cables



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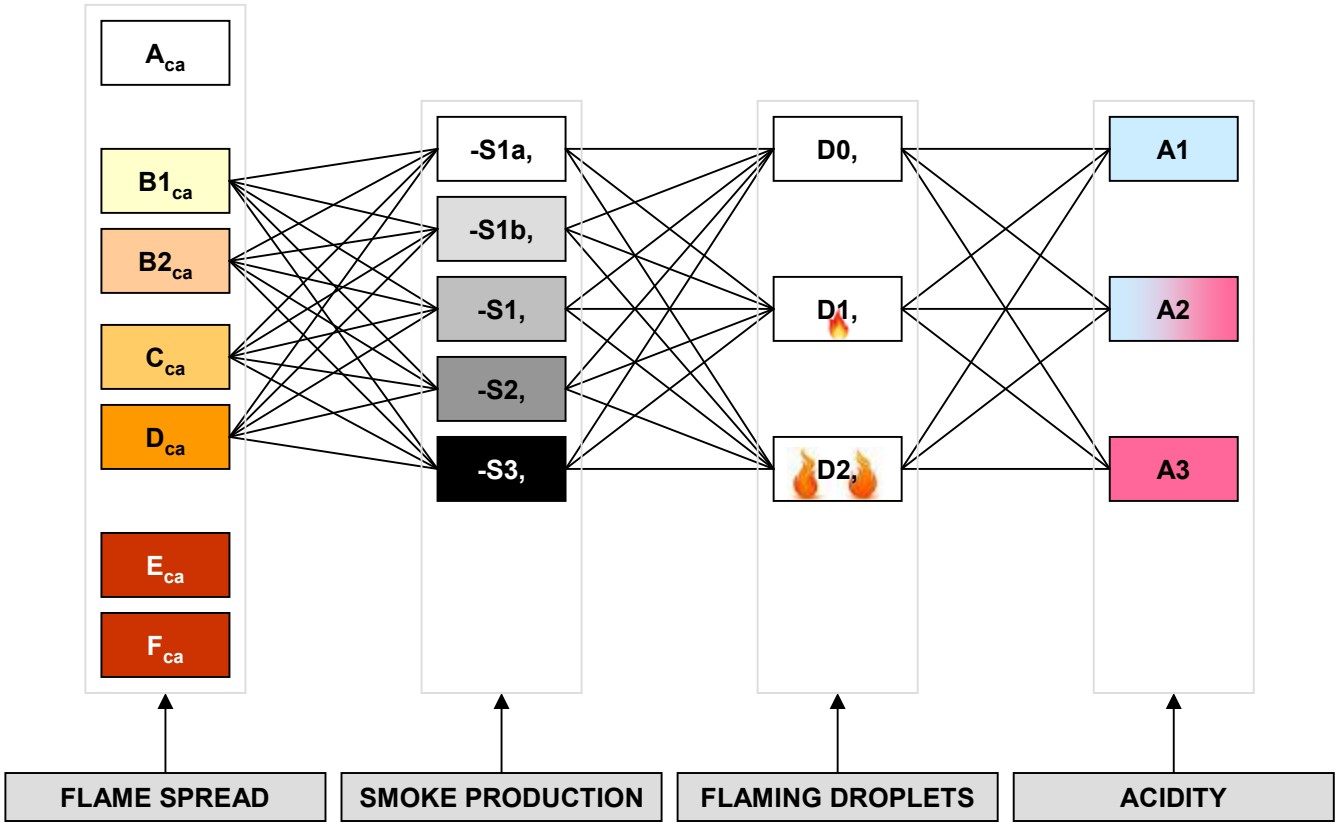

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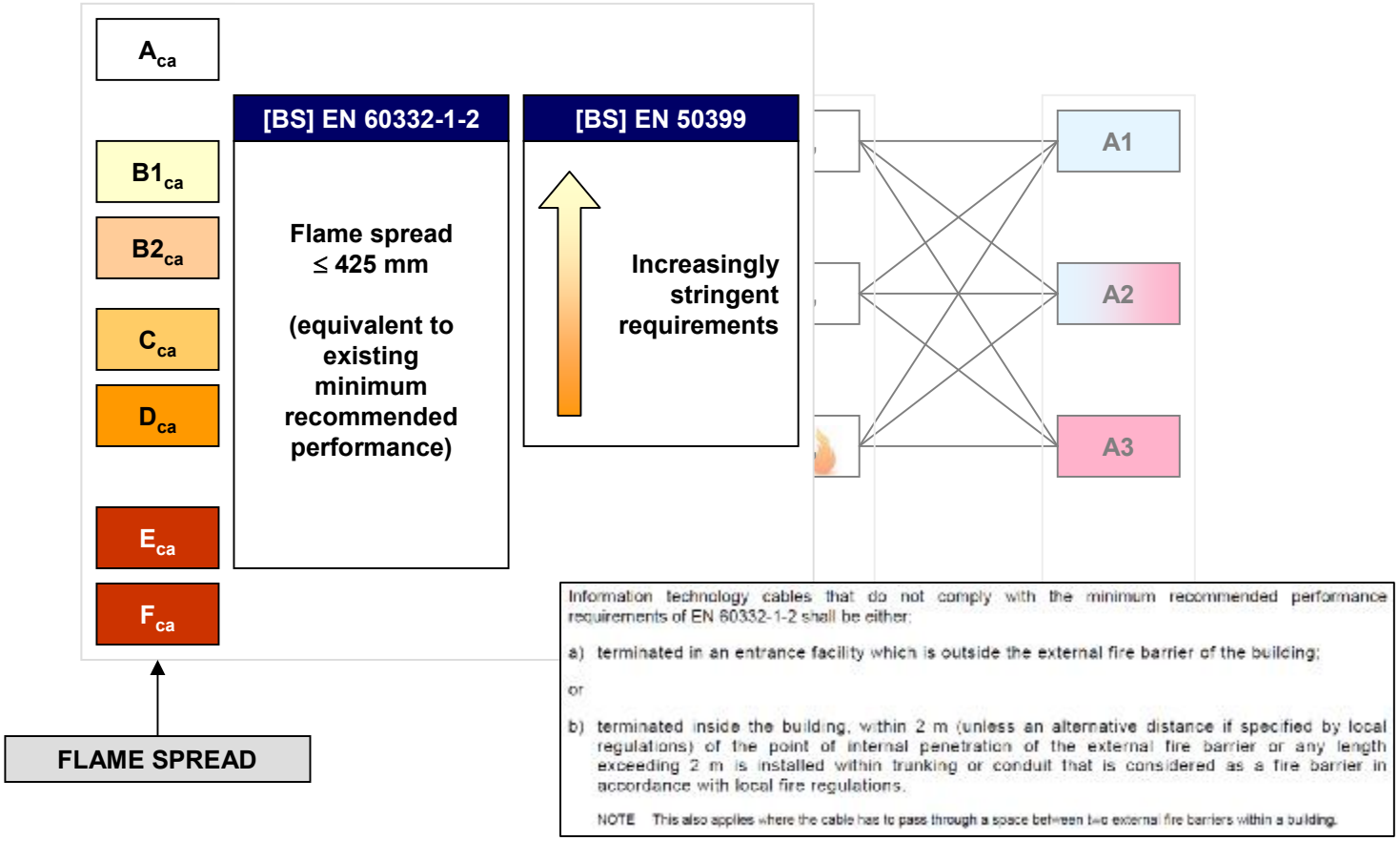
Flame Spread

[BS] EN 13501-6:2014: Fire classification of construction products and building elements
Part 6: Classification using data from reaction to fire tests on electric cables



Information technology cables that do not comply with the minimum recommended performance requirements of EN 60332-1-2 shall be either:

a) terminated in an entrance facility which is outside the external fire barrier of the building;

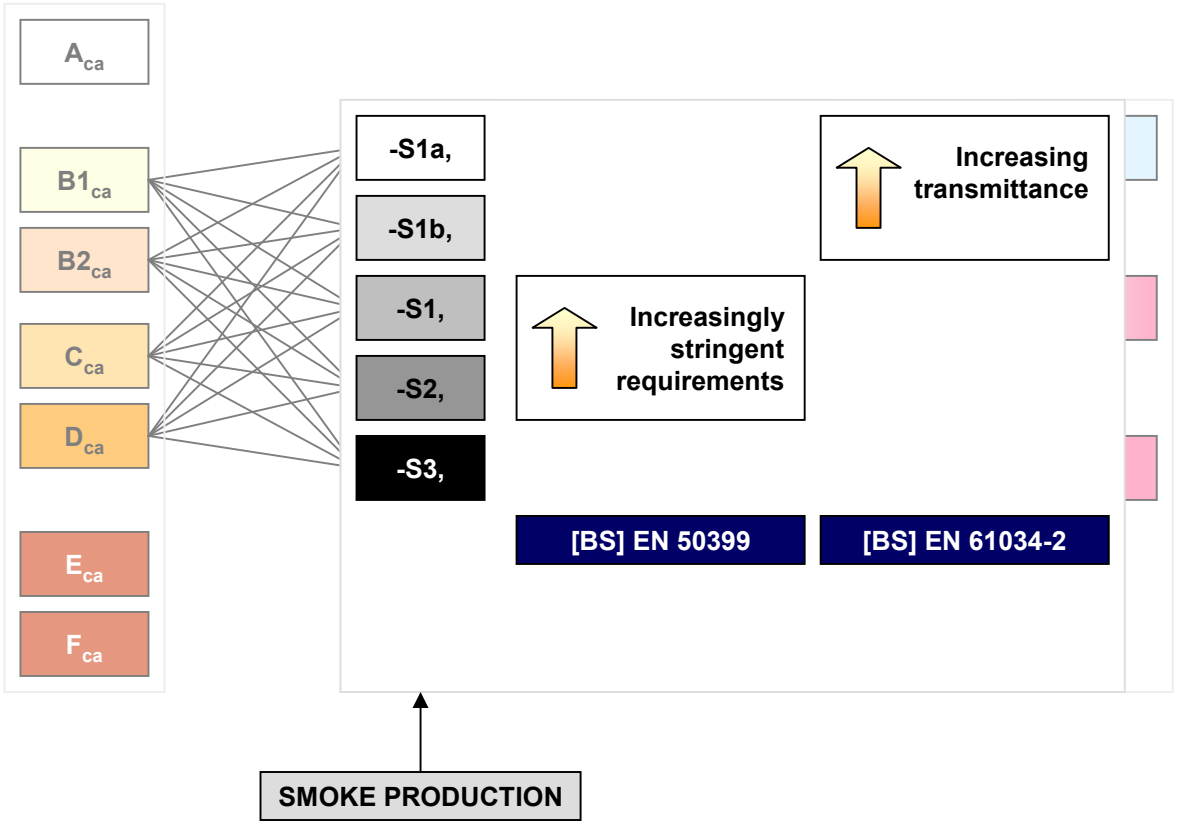
or

b) terminated inside the building, within 2 m (unless an alternative distance if specified by local regulations) of the point of internal penetration of the external fire barrier or any length exceeding 2 m is installed within trunking or conduit that is considered as a fire barrier in accordance with local fire regulations.

NOTE This also applies where the cable has to pass through a space between two external fire barriers within a building.

Smoke Production

[BS] EN 13501-6:2014: Fire classification of construction products and building elements
Part 6: Classification using data from reaction to fire tests on electric cables



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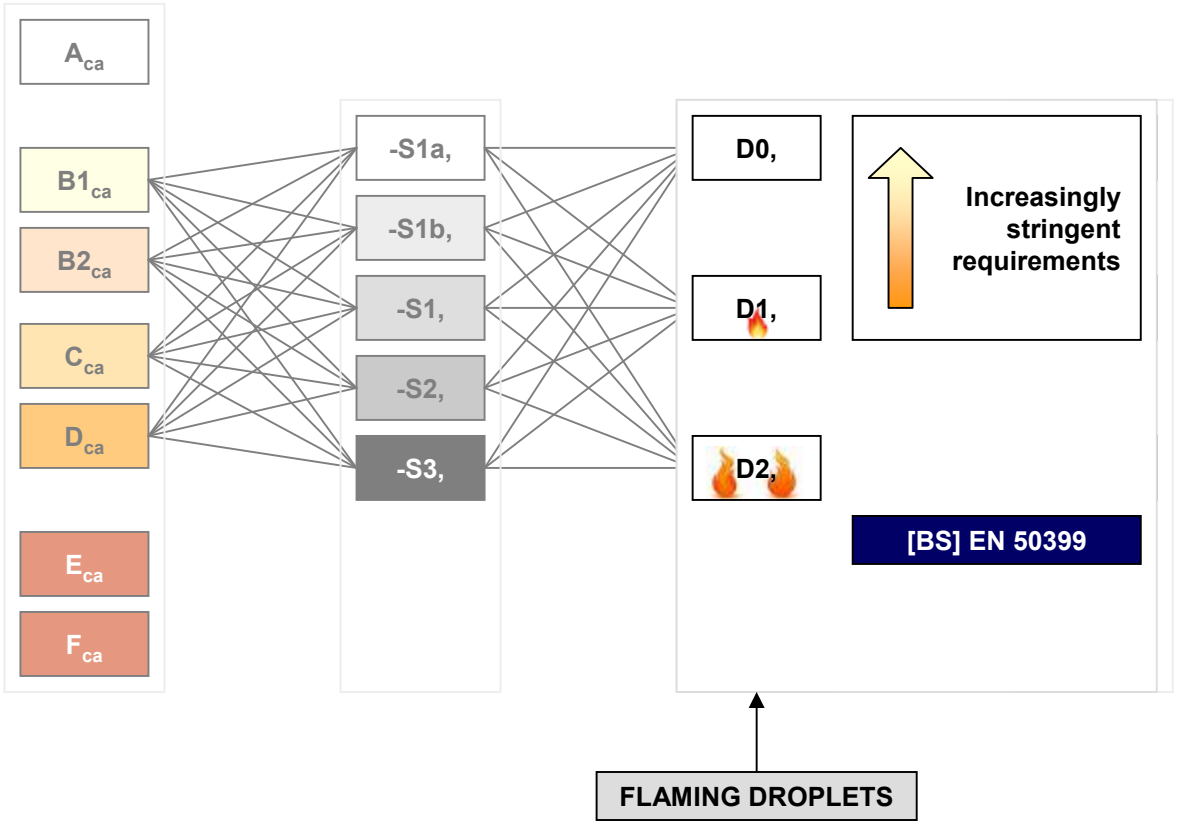
Flaming Droplets

[BS] EN 13501-6:2014: Fire classification of construction products and building elements
Part 6: Classification using data from reaction to fire tests on electric cables



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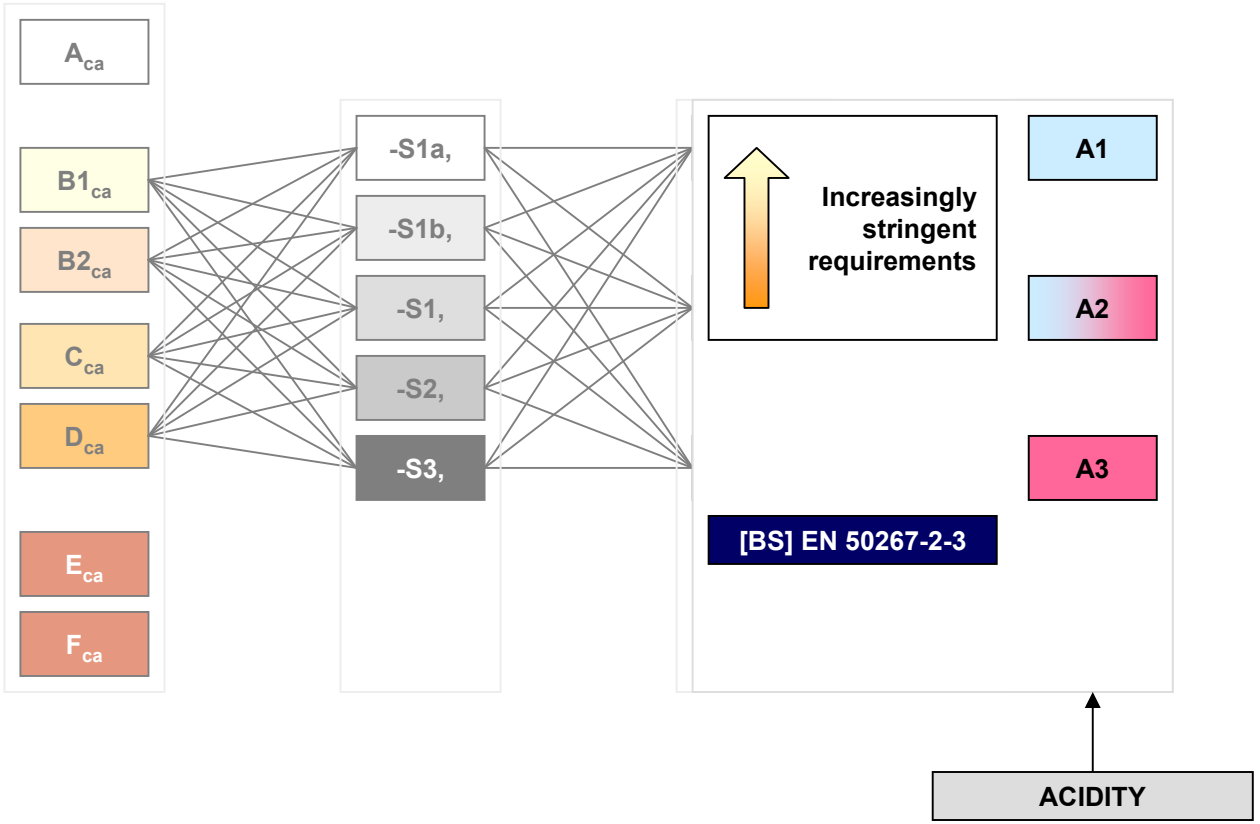
Acidity

[BS] EN 13501-6:2014: Fire classification of construction products and building elements
Part 6: Classification using data from reaction to fire tests on electric cables



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Implications

While the issue of certification is of commercial significance to cable manufacturers and suppliers, their customers, consultants and installers will instead be more interested in where cables of a given EuroClass should be used.

The CPR does not mandate or make recommendations as to the application of cables of a given EuroClass. However, the CPR does require that existing regulations for fire performance have to be replaced with EuroClass definitions and the basis of those regulations cannot be reduced.

With regard to communications cables, the UK does not have any national regulations which specify fire performance.

UK Government has stated that it is not intended to introduce any such requirements within general building regulations.

However, there are local regulations that state requirements for fire performance of cables (London Underground and other extended length tunnels are obvious examples) which may be required to be revised to adopt EuroClass designations.

Standards will also have to change

Future Impact on Standards

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BS EN 50174-1	Information technology. Cabling installation. Installation specification and quality assurance
BS EN 50174-2	Information technology. Cabling installation. Installation specification and quality assurance
BS EN 50174-3	Information technology. Cabling installation. Installation planning and practices outside buildings
	Updating the reference to EN 60332-1-2
BS 7671	Requirements for electrical installations. IET Wiring Regulations. Seventeenth edition
	Multiple changes required
BS 8492	Telecommunications equipment and telecommunications cabling. Code of practice for fire performance and protection
	May become the location for examples of application guides i.e. which EuroClass for which building space?

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Contractual Impacts

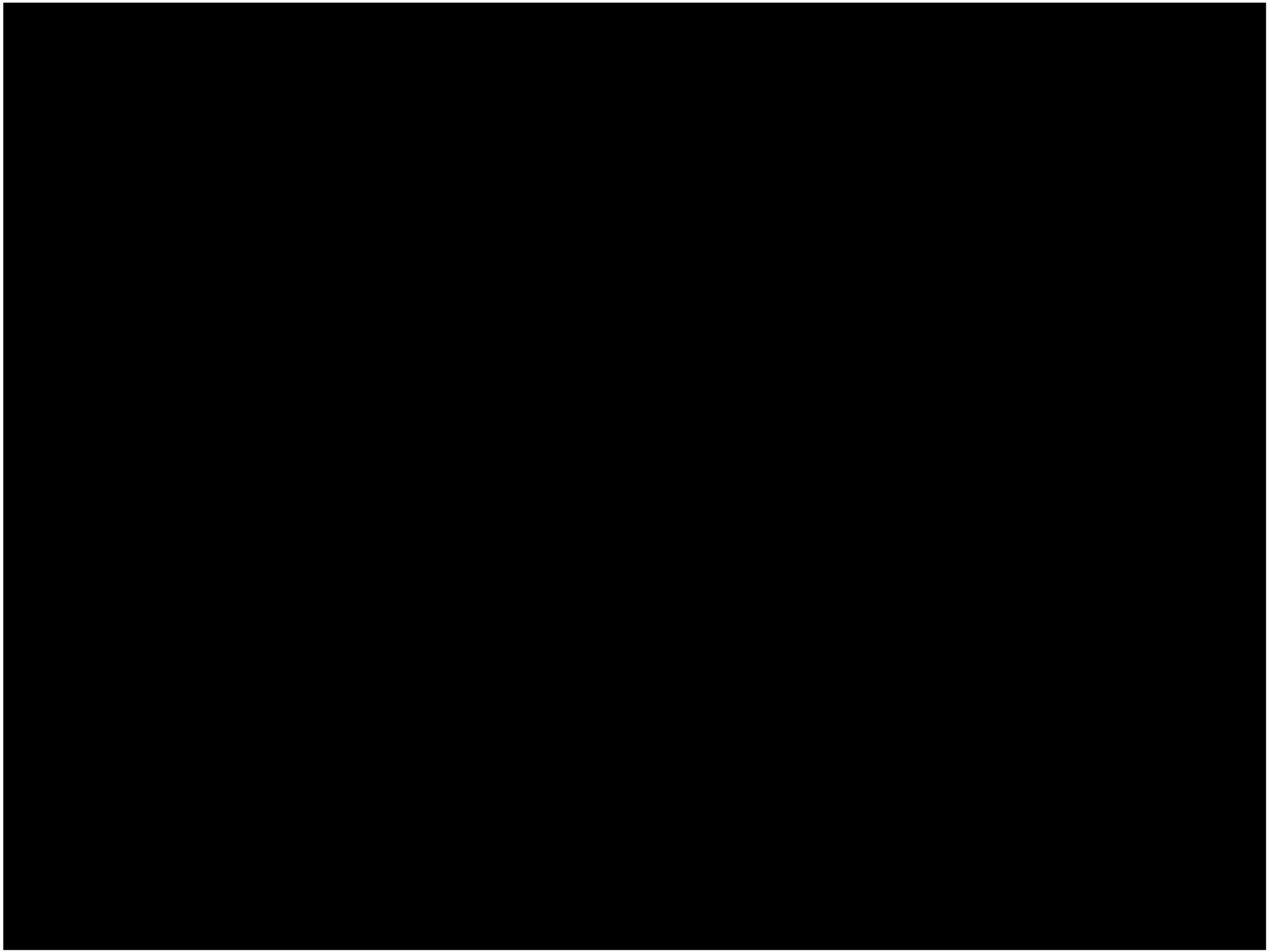
It is inevitable that consultants will start using the EuroClasses (possible before they are viable)

In theory, they could start as soon as the extension of the CPR to communications cables is approved by the European Commission (early 2015).

Availability of product could be restricted

- **Delay in ExAp for communications cables**
- **Paucity of approval/certification centres**

Caution may be required in responding to contractual (not legislative) demands



References

hEN 50575:2014	Power, control and communication cables - Cables for general applications in construction works subject to reaction to fire requirements
CLC TS 50576:2014	Electric cables - Extended application of test results
BS EN 13501-6:2014	Fire classification of construction products and building elements Part 6: Classification using data from reaction to fire tests on electric cables
BS EN 50399:2011	Common test methods for cables under fire conditions. Heat release and smoke production measurement on cables during flame spread test. Test apparatus, procedures, results
BS EN ISO 1716:2010	Reaction to fire tests for products. Determination of the gross heat of combustion (calorific value)
BS EN 61034-2:2013	Measurement of smoke density of cables burning under defined conditions. Test procedure and requirements
BS EN 50267-2-3:1999	Common test methods for cables under fire conditions. Tests on gases evolved during combustion of materials from cables. Procedures. Determination of degree of acidity of gases for cables by determination of the weighted average of pH and conductivity. Determination of degree of acidity of gases for cables by determination of the weighted average of pH and conductivity