

Construction Product Regulation

March 2019

This information has been derived from current cabling standards as well as from manufacturers whose products are used and often specified in to M & E Designs for projects in the U.K. The information is given without prejudice or liability as Bownet have simply collated the available information with a view to update their customers and ensure that they are aware of the recommendations in the standards.

On the 30th November 2017 saw the publication of BS6701: Amendment 1, prior to its adoption as a supplement to the upcoming BS7671 18th Edition of the IET Electrical Wiring Regulations in July 2018. The primary objective of the standard was to improve the performance of data and telecommunications cables in fire conditions.

The new BS6701: Amendment 1-2017 standard dictates a given EuroClass of Cca, S1b, d2, a2 cable construction in the permanent installation of both copper and fibre optic cables within a building.

EUROCLASS	Reaction to Fire			
A_{ca}	Gross heat of combustion EN ISO 1716	It's unlikely for many cables to meet class Aca		
		Smoke Production	Acidity	Flaming Droplets
B1_{ca}	Flame Spread EN 50399 also known as a ladder test and	Mandatory test for smoke production monitored during ladder test for s1, s2 and s3 If it passes s1 it can also undergo an additional higher level of test for s1a and s1b EN 61034-2	Optional separate test to measure the acidity of gasses given off. Measured as pH and conductivity µS/mm a1 - best a2 - middle a3 - worst EN 60754-2	Optional additional observation during the ladder fire test to monitor flaming droplets d0 - best d1 - middle d2 - worst EN 50399
B2_{ca}	EN 60332-1-2 Heat Release			
C_{ca}	EN 50399 Measured during the ladder test			
D_{ca}	Heat Release EN 50399 Flame Spread EN 60332-1-2	Also known as the 3m ³ test for smoke production		
E_{ca}	Flame Spread EN 60332-1-2 Also known as the Bunsen burner test	Basic test by independent authorised laboratory (notified body)		
F_{ca}	Factory or laboratory test (not necessarily notified body) but does not meet the requirements of class Eca			

Classes A to E have to be tested by an independent authorised laboratory (notified body). Most cables will fall into classes B2ca to Eca. For a cable to meet B1ca, B2ca or Cca, there also needs to be regular factory audits

This is to be applied to all UK construction projects, either new build, refurbishment or the extension of existing buildings where the installed cables are subject to the Construction Product Regulations.

Since the ratification of the Construction Product Regulations 2017, there has been a number of options within the EuroClass standards (see table below). The choice of which to implement has been left to each individual country within CENELEC to decide which construction is appropriate to meet the fire performance requirements of the building type on an individual basis. However, BS6701: A1-2017 has specified the Cca, S1b, d2, a2 EuroClass as the minimum standard to use in the UK.

What Does this Actually Mean?

It now means that all *M & E Specification and Design documents requiring telecommunications cables* must refer to BS6701: Amendment 1-2017 in the first instance for all projects to be issued

after 30th November 2017, and be seen to be specifying a EuroClass Cca,s1b,d2,a2 cable type for all data/telecommunication cables – unless the client specifically asks for a different type of cable classification.

Because the cabling infrastructure is ultimately to be governed by BS7671, the decision on the type of cabling to be used must be made during the design phase, and ultimately approved by the client – not the installer. Structured Cabling now supports most, if not all, modern intelligent building systems design and so covers much more than just traditional voice and data applications. BS6701: Amendment 1-2017 will now dictate all of these systems fall in line with the standard. The changes required should be applied to all specification documents in development, alongside the current references to ISO 11801 and EN 50173 that exist on current specification template documents.

In Conclusion

In regard to the Construction Product Regulation for telecommunication cables from 1st July 2017, all energy, communications and control cables that are placed on the market and intended to be installed in a “permanent” manner inside buildings and other structures have to be certified as being conformant to a specific EuroClass in relation to “reaction to fire”.

The fire performance tests are governed with BS6701 2016 and this standard was amended on 30th November 2017 to BS6701 2016+A1:2017 which increased the fire performance from EuroClass Eca to Cca-s1-d2-a2.

The EuroClass fire performance Cca-s1b-d2-a2 (BS6701 2016+A1:2017) has been published as part of the 18th edition of the IET Building Regs manual (BS 7671) released July 2018. BS7671 18th edition now coexists with the current 17th edition until January 2019. Legally speaking, the decision on selection of Cca or Eca is the choice of the end user but they should confirm in writing which type they require. **BS standards are not law**, but the end user would need a very valid reason for not adhering to them (from Jan 1st 2019) on new cabling in the event of a fire in the building and the cabling standards are scrutinised.

Taking into account the information available we advise our installers to be offering quotes with 2 options (but advise the client to install the BS6701:A1 EuroClass Cca or above);

OPTION 1 BS6701:A1 Compliant Cabling Price

OPTION 2 Non-compliant BS6701:A1 Cabling Price

Here’s what you need to specify as current standards; BS7671:2018 18th
Edition IET Electrical Wiring Regulations BS6701:2016:A1+2017 Telecommunications equipment and telecommunications cabling – Specification for installation, operation and maintenance.

NOTE The 18th Edition IET Wiring Regulations (BS 7671:2018) published in July 2018; All new electrical installations will need to comply with BS 7671:2018 from 1st January 2019 which defers to BS6701:2016 (**not amendment 1, which could be confusing**) for permanently installed telecommunication cables.