

Module 2 - Industry Standards



- ≡ European Standards
- ≡ International Standards
- ≡ National and Domestic Standards
- ≡ Applications
- ≡ Construction Products Regulation (CPR)

European Standards

This section covers all European and National Standards relating to structured cabling. Regardless of Brexit, the UK is still a voting member of Cenelec which is a European Standards body and has nothing to do with the EU. There are 33 voting members, which includes a number of countries outside the EU. All European Norms (EN) are adopted as National Standards by 40 countries in Europe. On adoption in the UK they become British Standards and therefore have the designation BS EN.



BS EN 50173 series - The standard that relates to the **design** of the structured cabling infrastructure.

- Part 1 covers the general requirements of the products used along with the performance requirements and limits.

- Parts 2-5 cover the specific requirements of the named environments.
- Part 6 covers all the other applications that are not direct voice and data, It provides specific guidance on the spacing and layout of wireless access points and what are called 'service areas' that are used.

BS EN 50173 Information technology – Generic cabling systems

Part 1: 2018	General Requirements
Part 2: 2018	Office Spaces
Part 3: 2018	Industrial Spaces
Part 4: 2018	Homes
Part 5: 2018	Data Centre Spaces
Part 6: 2018	Distributed Building Services

BS EN 50174 - Information technology – Cabling installation

This standard covers how structured cabling should be **installed**.

BS EN 50174-1:2018	Installation specification and quality assurance

BS EN 50174-2:2018	Installation planning and practices inside buildings
BS EN 50174-3:2013 + A1:2017	Installation planning and practices outside buildings

BS EN 50310: 2016 Application and Equipotential Bonding and Earthing in Buildings with Information Technology Equipment

This standard covers how to earth and bond a system.

There have been many important changes and additions to the above standards that need to be understood, the most important are:

- The inclusion of the Euroclasses from the CPR which is covered in a new Annex G that takes precedent.
- It is also changes related to the publication of IEEE 802.3bt 4PPoE and how cable bundle sizes and the spacing between them on containment to mitigate the impact of the heating effect that can occur. It suggests a 15mm air gap between bundles.
- The maximum stack height in a basket tray has been reduced. For example, a tray with 100mm between wires has been reduced from 140mm to 125mm.
- BS EN 50174-2 also introduces a new subclause and Annex C on planning and assessment of cabling in support of remote powering. This is a new Normative Annex and provides a series of calculations based on the findings of the research. Excel, amongst others, carried out research to look at the potential impact in performance due to the increase in heat caused when 4PPoE is deployed.

- It also has a completely new Clause 12 has been introduced; Cabling for distributed services within buildings which is in support of EN 50173-6 Distributed Building Services.
- BS EN 50310: 2016 provides guidance on how to Earth and Bond a cabling system. It provides details of how to earth and bond cabinets and connect them to the TMGB (telecoms main grounding busbar) etc. The details of the size and colour of earthing cables are provided in BS EN50174. In short there are two sizes to remember: 4 sq/mm for patch panels and cabinet components etc. and 16sq/mm for the cable that connects the cabinet to the TMGB.

International Standards

This section covers the industry standards used outside of Europe.



International
Organization for
Standardization

There is a close liaison between both Cenelec and ISO - test limits are exactly the same. TIA limits are different and not as high.

There is 2.6dB difference in NEXT Limits for Class EA/Category 6A.

The content is very similar to BS EN 50173 series however whilst the latter contains similar wording of an important clause it is clearer in ISO/IEC 11801: "A minimum of Category 6 should be installed and if you are planning to exceed 1Gbps you should install Class EA/Category 6A."

This version had some other key changes, introducing Channels I and II made up of Category 8.1 and 8.2 which are specific to Data Centre Applications.

ISO/IEC 11801: 2017

ISO/IEC 11801-1:2017	Part 1: General requirements
ISO/IEC 11801-2:2017	Part 2: Office Spaces
ISO/IEC 11801-3:2017	Part 3: Industrial Spaces
ISO/IEC 11801-4:2017	Part 4: Homes
ISO/IEC 11801-5:2017	Part 5: Data Centre Spaces
ISO/IEC 11801-6:2017	Part 6: Distributed Building Services

Important Clauses

- 6.3.2.2 Requirements
 - 6.3.2.2.2 Horizontal cabling
 - Horizontal balanced cabling shall provide Class E or better channel performance as specified in ISO/IEC 11801-1:2017, 6.3. Class EA or better performance is recommended for support of applications with data rates exceeding one gigabit per second.
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MANUFACTURERS & SUPPLIERS OF GLOBAL NETWORKS

We mention these standards for historical and reference purposes in Europe.

They are also sometimes referenced by US organisations moving to Europe, however local and domestic standards should always take precedence.

There are, however, two sections that are used:

- The first for the 'wiremap' used for balanced twisted pair termination or either T568A or T568B, the latter being the version to use in Europe.
- The second is T598 which is the colour code scheme used to identify the cores of a fibre optic cable. The scheme is also the one used by many of the telecoms companies in Europe such as British Telecom and France Telecom.

ANSI/TIA-568-D Published: 2017

ANSI/TIA-568-0.D	Generic Telecommunications Cabling for Customer Premises
ANSI/TIA-568-1.D	Commercial Building Telecommunications Cabling Standard
ANSI/TIA-568-2.D	Balanced Twisted-Pair Telecommunications Cabling and Components Standard
ANSI/TIA-568-3.D	Optical Fibre Cabling Components Standard
ANSI/TIA-568-4.D	Coaxial and Broadband Components Standard

National and Domestic Standards

Many countries in Europe have national standards that also need to be adhered to. Most importantly they provide guidance in relation to the CPR (Construction Products Regulation)

In the UK there are two domestic standards to note:

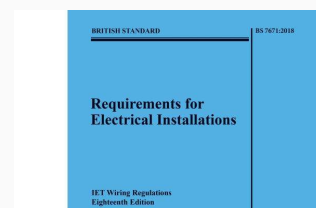
BS 6701:2016 +A1:2017

Telecommunications equipment and telecommunications cabling. Specification for installation, operation and maintenance.



BS 7671:2018

Requirements for electrical installations. IET Wiring



Regulations. (Eighteenth edition was published 1st July 2018 and came into force on 1st January 2019)



It is important to note that standards are not regulations they are recommendations. And an organisation can choose to be non-standards compliant however this would not be a wise move when it comes to matters of life-safety such as the CPR. Which could in turn impact their Insurance cover.

BS 6701:2016+A1:2017

- Installation Cables 'cables intended for installation into pathways which are hidden (below floors, above ceilings, behind walls) or to which access is limited and which can either be terminated in-situ or pre-terminated
- Fire performance of telecommunications cables ' for new installations and the refurbishment or extension of existing installations within the external fire barrier of the building, installation cables which are subject to the CPR shall as a minimum meet the requirements of Euroclass Cca-s1b,d2,a2.....

BS7671

- The Wiring Regulations are not really a regulation it is actually a standard, however, it can be referenced in regard to the Electrical Safety at Work Act which is legally binding.
- It also contains some important details regarding the fixing of cables, the clause changed from cables in an Escape route cannot be fixed at height with non-metallic fixings i.e. plastic. This has now been changed to all areas.

What should I use?

Local Regulations take precedence and must be followed. In the UK we only have standards which are recommendations however, some countries do have Regulations that must be followed especially concerning CPR.

In Europe, we recommend the National and EN series:

- **EN 50173 series** – Design
- **BS 6701** – Installation O&M (Operation and Maintenance)
- **EN 50174 series** – Admin, Spaces, Pathways, Pathway Systems
- **EN 50174 series** - Installation
- **EN 50174 series & EN 50310** – Functional Bonding
- **EN 50173 series** - Testing

 **BS6701** is mentioned for UK as it covers certain detail regarding what should be contained within the O&M (Operation and Maintenance) manual that is handed over to the Client at the end of project as well as the recommendation for what Euroclass of cable should be installed

Applications

Ethernet and IEEE

Whilst the IEEE are not directly involved in cabling standards, they are responsible for the applications that impact the cabling. They ratified and published 10GBase-T (10 Gigabit over twisted pair cabling) in 2006 for example.

 Power over Ethernet is contained in a module all on its own however, some other recent developments need to be covered as they have a direct impact on how we design and install a cabling system.

Screened cabling has a number of key benefits over unscreened especially when it comes to higher frequencies and bandwidth. In 10GBASE-T applications, the noise source that limits the ability to transmit 10Gb Ethernet over copper cabling is alien crosstalk. Because the 10GBASE-T receiver cannot compensate for the noise from adjacent channels, this effect must be cancelled out wherever possible by the cabling system to ensure reliable data transmission.

 An F/UTP can also be susceptible to crosstalk in the same way as U/UTP as it doesn't have screening around the pairs, it is slightly better than the latter for blocking external influences.

To Screen or not to Screen

For more details please see the white paper on the Excel website.

[VIEW WHITEPAPER](#)

WiFi

- 802.11ac brought us potential bandwidth above 6Gbps
 - Multiple simultaneous conversations
- 802.11ax (WiFi 6) will bring even more simultaneous conversations
 - Meaning the Access Point (AP) will consistently operate at the higher bandwidth
 - It will also mean they will require a higher level of PoE
 - A minimum of Category 6A/ClassEA will be needed to support modern 802.11ac or ax APs

More detail on the impact on the cabling can be found in the whitepaper linked below:



Excel Whitepaper_Guidelines for providing structured cabling to Wireless Access Points.pdf

690.8 KB



Single Pair Ethernet

- IEEE put an 802.3 working group together in 2016
- This will not replace 4 pair cabling for Voice and Data, rather it will compliment it for Industrial and Building Automation
- IEEE 802.3cg: 2019 – 10 Mb/s

- 10BASE-T1S – Link segment (point-to-point), 4 connections, 15m reach, PoDL power
- 10BASE-T1L – Link segment (point-to-point), 10 connections, 1000m reach, PoDL power

More detail on the impact on the cabling can be found in the whitepaper linked below:



Excel Whitepaper_Single Pair Ethernet.pdf

788.4 KB



 There currently no commercial systems available but there have been major test bed announcements from chip manufacturers such as Texas Instruments. The Connector types to be used have been ratified, a screened hardened connector for Industrial applications and one with a similar profile to a single LC connector for Building Automation. The cable will be anywhere between 18-24 AWG dependent upon the distance and number of connections. It also delivers power in a similar manner to PoE however it is called Power over Data Line (PoDL) pronounced 'poodle'.

Construction Products Regulation (CPR)



The CPR is legislation that aims to standardise the safety requirements of materials/products used in new building constructions or refurbishments.

This is not new, it replaced the Construction Products Directive in 2011 and in 2016 its scope was extended to include setting 'classifications' which denoted how a cable reacts to fire.

The regulation applies to all products that are deemed to be permanently installed – and covers power, data and communications cables.

It does not cover patch leads.

For Excel, the products in scope are: solid conductor copper, internal bulk fibre, fibre trunk cables, internal voice cables, coax cables*, Belden equivalents*.

i * There have been questions raised in certain countries regarding the Belden equivalents and COAX. Based upon the intended use they may be defined as signal/control cables however BS6701 is very clear in its definitions and they are covered.

3.1.6 telecommunications system - combination of telecommunications equipment and telecommunications cabling providing distribution of telecommunications applications within and/or between premises

i Examples of telecommunications applications are those which perform actions such as processing, displaying or transferring information including numerical data, text, audio, still or moving images together with any combination of these. Telecommunications applications are also used to control machinery, building facilities or other non-telecommunications equipment.

 It must be noted that **internal Blown Fibre** is not covered by the CPR, because the blown ducts are seen as containment which is outside the Regulation, and the EPFU fibre units are not a cable as they have said to be 'non self-sustaining' outside of the ducts as they do not have any strength members.

To meet the CPR products must pass a series of tests dependent on the Euroclass they are designed to meet. There are two main levels of testing:

1

System 3

Product only tested by independent test lab (applies the lower Euroclasses E & D)

2

System 1+

Product tested, and factory audited by independent test lab every 6 months applies to higher Euroclasses C & B

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 EN 60332-1-2 Heat Release EN 50399 Measured during the ladder test	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 Also known as the 3m³ test for smoke production	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}				
C_{ca}				
D_{ca}	Heat Release EN 50399 Flame Spread EN 60332-1-2			
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

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

- There is no Vertical flame spread requirements for both D and E however, under System 1+ it has far more stringent testing requirements.
- The heat source is 20.5Kw for 20 mins which is more than twice the level used in 60332-3 testing, furthermore the limit is a strict requirement of 2m for C and 1.5m for B2 rather than 2.5m in 60332-3.
- The process is also far more complex to get a new cable certified to System 1+, you first have to send the cable to an accredited Notified Body (test house), you have to instruct them to what level you want the cable tested C or B2, as it is destructive testing you don't get a second chance. Based upon the initial result, it is then a case of applying for certification.
- The next stage is a 2 day audit of the manufacturing facility by the Notified Body and all the processes involved including raw material management record keeping. At the end of this the Notified Body witnesses a batch of cable being manufactured, they then take a sample of this from the production line back to there facility and test it. If this batch matches the results of the first test, they then produce a test report and issue the certification.
- To maintain the certification they carry out audit inspections every 6 months for 2 years, at which point they take a new sample and test it again.

EUROCLASSES

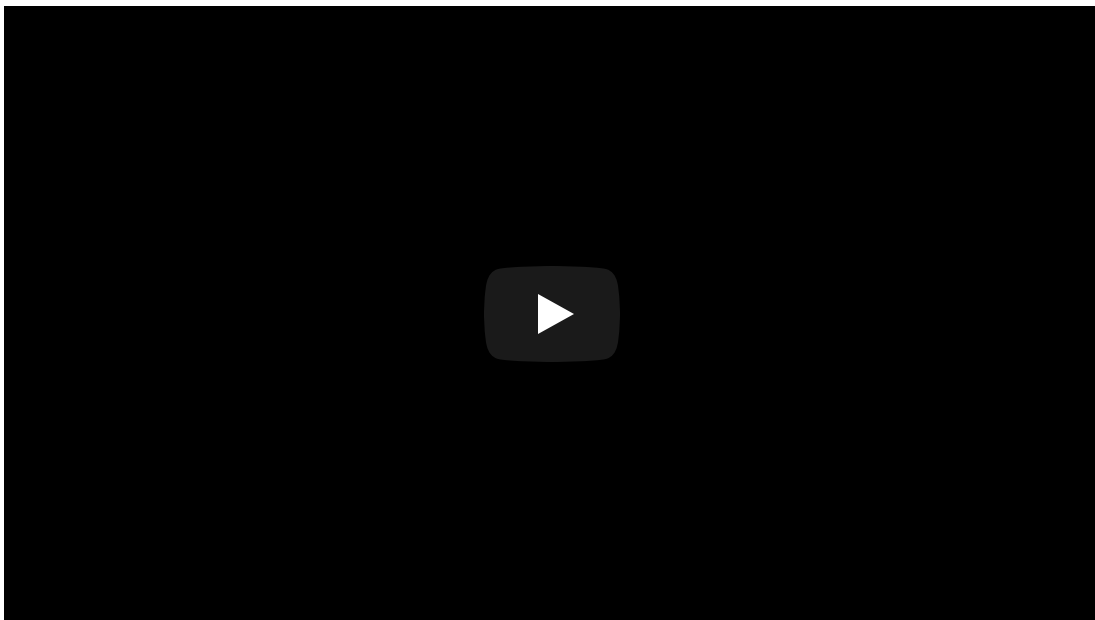
SMOKE PRODUCTION

ACIDITY

FLAMING DROPLETS

7 Euroclasses for flame spread and heat release: A, B1, B2, C, D, E and F

(A being the highest class i.e. no reaction and F having no criteria specified)



EUROCLASSES

SMOKE PRODUCTION

ACIDITY

FLAMING DROPLETS

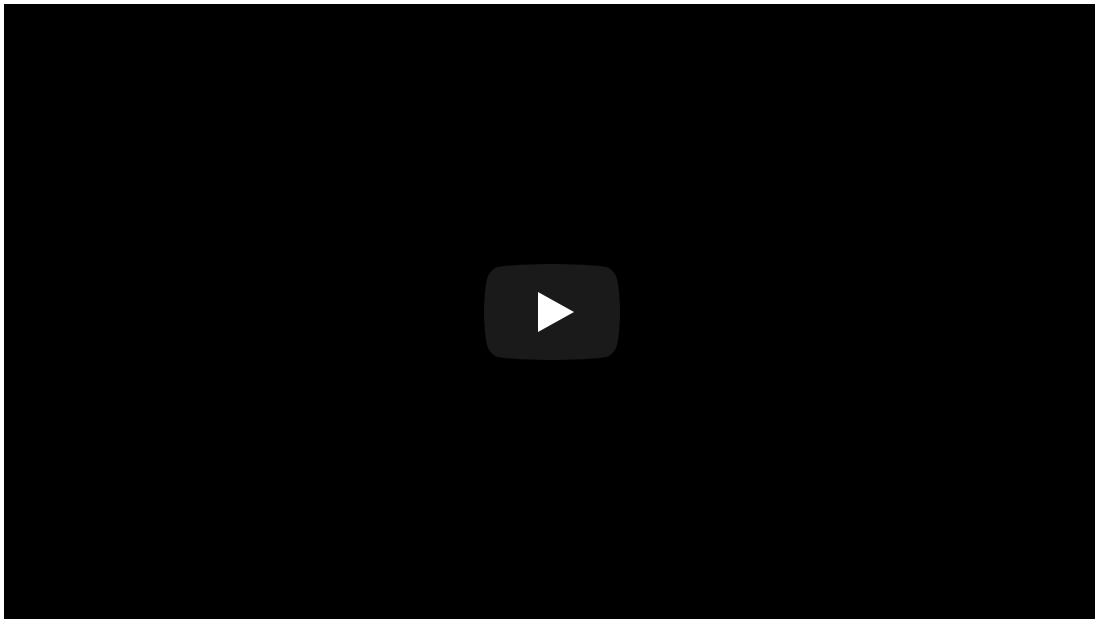
5 classifications for smoke production: s1, s1a, s1b, s2, s3

(s1a being the highest class and s3 no criteria specified or failing any of the other four classifications)

Smoke Production, is further complicated as it also looks how dense the smoke is and how much light can be transmitted through it in a second stage test if you pass s1.

- $s1 = TSP1200 \leq 50 \text{ m}^2$ and $\text{Peak SPR} \leq 0.25 \text{ m}^2/\text{s}$
- $s1a = s1$ and transmittance in accordance with EN 61034-2 $\geq 80\%$
- $s1b = s1$ and transmittance in accordance with EN 61034-2 $\geq 60\% < 80\%$
- $s2 = TSP1200 \leq 400 \text{ m}^2$ and $\text{Peak SPR} \leq 1.5 \text{ m}^2/\text{s}$
- $s3 = \text{not } s1 \text{ or } s2$

TSP = Total Smoke Production, SPR= Smoke Production Rate



EUROCLASSES

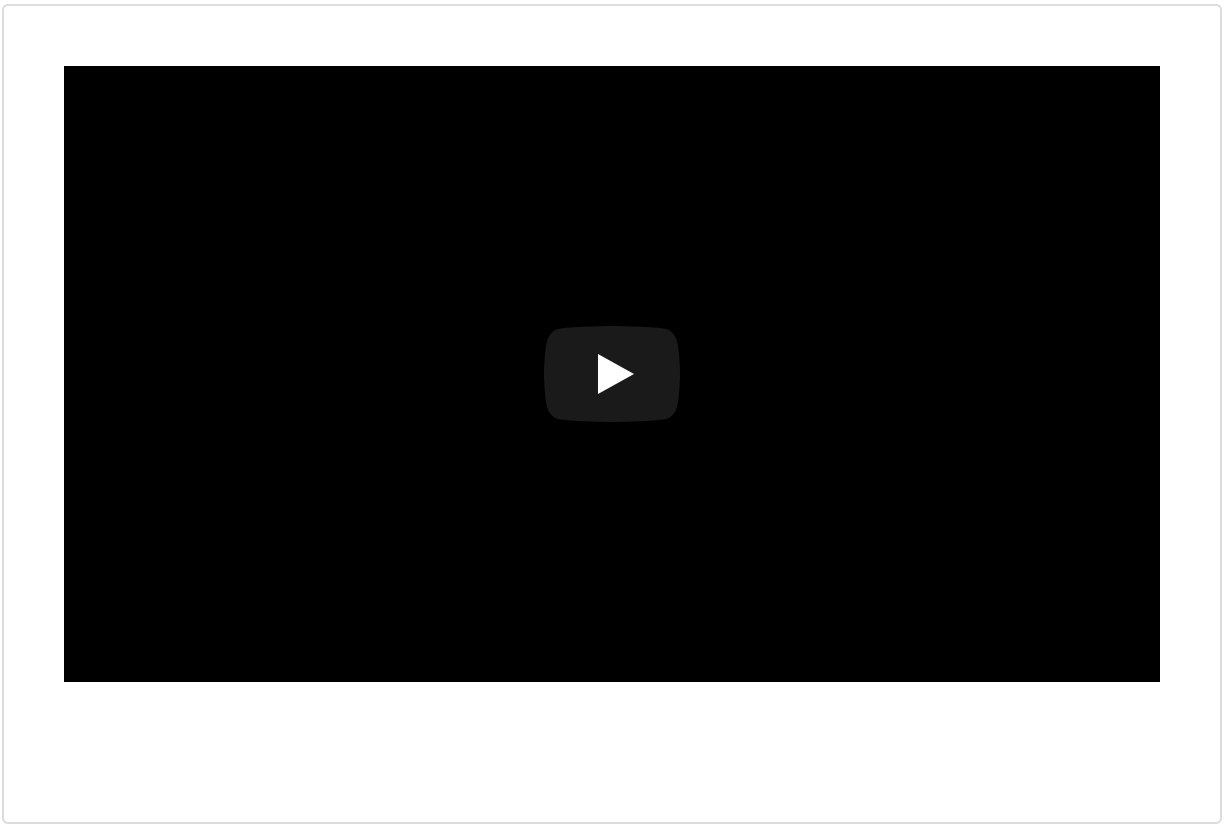
SMOKE PRODUCTION

ACIDITY

FLAMING DROPLETS

3 classifications for acidity: a1, a2, a3

(a1 being the highest class and a3 no criteria specified or failing any of the other two classifications)



EUROCLASSES	SMOKE PRODUCTION	ACIDITY	FLAMING DROPLETS
-------------	------------------	---------	------------------

3 classifications for flaming droplets: d0, d1, d2
(d0 being the highest class and d2 no criteria specified or failing any of the other two classifications)



Excel Explains... CPR

Excel's series of "Excel Explains" webinars has been designed to provide important technology updates in bite size sessions and are based on frequently asked questions received by our Technical Team. You've seen a few of the CPR series above, but you can visit our Youtube channel to view the full playlist.

[VIEW PLAYLIST](#)

National Implementations

Each country is implementing the regulation slightly differently. There is a link at the end of this module to access the Excel Encyclopaedia, which has a table containing the best information we have at the time of writing.

The UK is contained in BS 6701:2016+A1:2017 and the key definitions are:

Installation Cables – “Cables intended for installation into pathways which are hidden (below floors, above ceilings, behind walls) or to which access is limited and which can either be terminated in-situ or pre-terminated”

Fire performance of telecommunications cables – “For new installations and the refurbishment or extension of existing installations within the external fire barrier of the

building, installation cables which are subject to the CPR shall as a minimum meet the requirements of Euroclass Cca-s1b,d2,a2"

Legal Responsibilities

The Installer has no formal legal responsibility (with the exception of The Netherlands). They do have a duty of care and moral responsibility to inform and educate their client of the impact.

The two legal responsibilities lie with:

- The **Manufacturer** to produce cables that comply with the regulation and ensure they have a Technical Library to prove their products meet it
- The **End User** to instruct the installer as to what they want, as they have a duty of care of their employees and visitors and to meet their Insurance Requirements
 - It is **not** for the main contractor or M&E contractor to make that decision.

 If the installer is instructed to not meet BS 6701 by the main contractor or M&E contractor it is suggested they gain this instruction in writing as there have been instances in the 4 years since this came into force that installers have been taken to court by the end-user and made to re-install a replacement system that meets the requirements at their own cost.

The Declaration of Performance (DOP) Certificate

The content of the DOP is set out by the regulation and all manufacturers' DOP certificates should look very similar.

+

Declaration of Performance

DOP-EXL259

excel

without compromise.

+

Unique identification code of the product type:

100-043

+

Type, batch or serial number or any other element allowing identification of the construction product as required:

The type number of 100-043 : see the print on the cable or sticker on the box

+

Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:

Supply of electricity and communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke

Name, registered trade name or registered trade mark, and contact address of the manufacturer as required under Article 11(2):

Excel

Excel House

Junction Six Industrial Estate

Electric Avenue, Birmingham, UK, B6 7AJ

Tel : +44 (0)121 326 7557

Fax : +44 (0)121 326 1537

E-mail : CPR@excel-networking.com

+

Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2):

N/A

System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V:

System 3

+

In case of the declaration of performance concerning a construction product covered by a harmonized standard:

Notified product certification body No. 2061 performed the determination of product type.

+

Declared performance:

Essential characteristics	Performance	Harmonised technical specification
Reaction to fire	Eca	BS EN 50575 2014+A1 2016
Dangerous substances	None	

+

The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 5.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

Name: Neil Payne

Position: Product Manager

Signature

Neil Payne

Place & Date: Birmingham, UK, Jun 1 2017

en

de

dk

es

fr

it

nl

no

pl

pt

se

si

pl

+

Declaration of Performance
DOP-EXL259

1

Unique identification code of the product type:

100-043

2

Type, batch or serial number or any other element allowing identification of the construction product as required:

The type number of 100-043 : see the print on the cable or sticker on the box

3

Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:

Supply of electricity and communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke

4

Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(2):

Excel
Excel House
Junction Six Industrial Estate
Electric Avenue, Birmingham, UK, B6 7AJ
Tel : +44 (0)121 326 7557
Fax : +44 (0)121 326 1537
E-mail : CPR@excel-networking.com

5

Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2):

N/A

6

System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V:

System 3

7

In case of the declaration of performance concerning a construction product covered by a harmonized standard:

Notified product certification body No. 2061 performed the determination of product type.

8

Declared performance:

Essential characteristics	Performance	Harmonised technical specification
Reaction to fire	Eca	BS EN 50575 2014+A1 2016
Dangerous substances	None	

The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8.
This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

Name: Neil Payne

Position: Product Manager

Signature

Place & Date: Birmingham, UK, Jun 1 2017

en

de

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DOP Number

Declaration of Performance

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Unique identification code of the product type:

100-043

2

Type, batch or serial number or any other element allowing identification of the construction product as required:

The type number of 100-043 : see the print on the cable or sticker on the box

3

Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:

Supply of electricity and communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke

4

Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(2):

Excel
Excel House
Junction Six Industrial Estate
Electric Avenue, Birmingham, UK, B6 7AJ
Tel : +44 (0)121 326 7557
Fax : +44 (0)121 326 1537
E-mail : CPR@excel-networking.com

5

Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2):

N/A

6

System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V:

System 3

7

In case of the declaration of performance concerning a construction product covered by a harmonized standard:

Notified product certification body No. 2061 performed the determination of product type.

8

Declared performance:

Essential characteristics	Performance	Harmonised technical specification
Reaction to fire	Eca	BS EN 50575 2014+A1 2016
Dangerous substances	None	

The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

Name: Neil Payne

Position: Product Manager

Signature *Neil Payne*

Place & Date: Birmingham, UK, Jun 1 2017

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Unique Identifier

Declaration of Performance
DOP-EXL259

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without compromise.

1	Unique identification code of the product type		
	100-043		
2	Type, batch or serial number or any other element allowing identification of the construction product as required: The type number of 100-043 : see the print on the cable or sticker on the box		
3	Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer	4 Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(2)	
	Supply of electricity and communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke	Excel Excel House Junction Six Industrial Estate Electric Avenue, Birmingham, UK, B6 7AJ Tel : +44 (0)121 320 7557 Fax : +44 (0)121 320 1537 E-mail : CPR@excel-networking.com	
5	Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2)	6 System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V	
	N/A	System 3	
7	In case of the declaration of performance concerning a construction product covered by a harmonized standard: Notified product certification body No. 2061 performed the determination of product type.		
8	Declared performance:		
	Essential characteristics	Performance	Harmonised technical specification
	Reaction to fire	Eca	BS EN 50575 2014+A1 2016
	Dangerous substances	None	
The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.			
Signed for and on behalf of the manufacturer by:			
Name: Neil Payne		Signature <i>Neil Payne</i>	
Position: Product Manager			
Place & Date: Birmingham, UK, Jun 1 2017			
on do dk eo e fr il nl no pt ro se si pl			

Generic Product Type

Declaration of Performance

DOP-EXL259

excel
without compromise.

1 Unique identification code of the product type:		
100-043		
2 Type, batch or serial number or any other element allowing identification of the construction product as required:		
The type number of 100-043 : see the print on the cable or sticker on the box		
3	3.1 Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:	3.2 Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(2):
	Supply of electricity and communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke	Excel Excel House Junction Six Industrial Estate Electric Avenue, Birmingham, UK, B6 7AJ Tel : +44 (0)121 326 7557 Fax : +44 (0)121 326 1537 E-mail : CPR@excel-networking.com
4	4.1 Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2):	4.2 System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V:
	N/A	System 3
5 In case of the declaration of performance concerning a construction product covered by a harmonized standard:		
Notified product certification body No. 2061 performed the determination of product type.		
6 Declared performance:		
Essential characteristics	Performance	Harmonised technical specification
Reaction to fire	Eca	BS EN 50575 2014+A1 2016
Dangerous substances	None	
The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 6. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.		
Signed for and on behalf of the manufacturer by:		
Name: Neil Payne		Signature <i>Neil Payne</i>
Position: Product Manager		
Place & Date: Birmingham, UK, Jun 1 2017		
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Intended Use

Declaration of Performance
DOP-EXL259

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1. Unique identification code of the product type: 100-043		
2. Type, batch or serial number or any other element allowing identification of the construction product as required: The type number of 100-043 : see the print on the cable or sticker on the box		
3. Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer: Supply of electricity and communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke	4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(2): Excel Excel House Junction Six Industrial Estate Electric Avenue, Birmingham, UK, B6 7AJ Tel : +44 (0)121 326 7557 Fax : +44 (0)121 336 1537 E-mail : CPR@excel-networking.com	
5. Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2): N/A	6. System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V: System 3	
7. In case of the declaration of performance concerning a construction product covered by a harmonized standard: Notified product certification body No. 2061 performed the determination of product type.		
8. Declared performance:		
Essential characteristics	Performance	Harmonised technical specification
Reaction to fire	Eca	BS EN 50575 2014+A1 2016
Dangerous substances	None	
The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.		
Signed for and on behalf of the manufacturer by: Name: Neil Payne Position: Product Manager Place & Date: Birmingham, UK, Jun 1 2017		
Signature <i>Neil Payne</i>		
on do dk ew e fr il nl no pt ro se si pl		

Manufacturer Name & Address

Declaration of Performance
DOP-EXL259

excel
without compromise.

1. Unique identification code of the product type: 100-043		
2. Type, batch or serial number or any other element allowing identification of the construction product as required: The type number of 100-043 : see the print on the cable or sticker on the box		
3. Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer: Supply of electricity and communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke	4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(2): Excel Excel House Junction Six Industrial Estate Electric Avenue, Birmingham, UK, B6 7AJ Tel : +44 (0)121 326 7557 Fax : +44 (0)121 336 1537 E-mail : CPR@excel-networking.com	
5. Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2): N/A	6. System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V: System 3	
7. In case of the declaration of performance concerning a construction product covered by a harmonized standard: Notified product certification body No. 2061 performed the determination of product type.		
8. Declared performance:		
Essential characteristics	Performance	Harmonised technical specification
Reaction to fire	Eca	BS EN 50575 2014+A1 2016
Dangerous substances	None	
The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.		
Signed for and on behalf of the manufacturer by: Name: Neil Payne Position: Product Manager Signature: <i>Neil Payne</i> Place & Date: Birmingham, UK, Jun 1 2017		

en de dk es fr it nl no pt ro se si pl

AVCP System of Assessment

excel
without compromise.

Unique Identification code of the product type

100-043

1 Type, batch or serial number or any other element allowing identification of the construction product as required:

The type number of 100-043: see the print on the cable or sticker on the box

2 Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(5):

Excel
Excel House
Junction Six Industrial Estate
Electro Avenue, Birmingham, UK, B6 7JJ
Tel: +44 (0)121 326 7667
Fax: +44 (0)121 320 1537
E-mail: CPR@excel-networking.com

3 Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:

Supply of electricity and communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke

4 Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2):

N/A

5 In case of the declaration of performance concerning a construction product covered by a harmonized standard:

Notified product certification body No. 2661 performed the determination of product type

6 System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V:

System 3

7 Declared performance:

Essential characteristics	Performance	Harmonized technical specification
Reaction to fire	Eca	BS EN 50575:2014+A1:2016
Dangerous substances	None	

The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8.
This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

Name: Neill Payne

Position: Product Manager

Signature *Neill Payne*

Place & Date: Birmingham, UK, Jun 1 2017

en
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es
fr
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ID of notified body, and scope of work they performed

Declaration of Performance
DOP-EXL259



1. Unique identification code of the product type:		
100-043		
2. Type, batch or serial number or any other element allowing identification of the construction product as required:		
The type number of 100-043 : see the print on the cable or sticker on the box		
3. Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:	4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(2):	
Supply of electricity and communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke	Excel Excel House Junction Six Industrial Estate Electric Avenue, Birmingham, UK, B6 7AJ Tel : +44 (0)121 320 7557 Fax : +44 (0)121 320 1537 E-mail : CPR@excel-networking.com	
5. Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2):	6. System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V:	
N/A	System 3	
7. In case of the declaration of performance concerning a construction product covered by a harmonized standard:		
Notified product certification body No. 2061 performed the determination of product type.		
8. Declared performance:		
Essential characteristics	Performance	Harmonised technical specification
Reaction to fire	Eca	BS EN 50575 2014+A1 2016
Dangerous substances	None	
The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.		
Signed for and on behalf of the manufacturer by:		
Name: Neil Payne		Signature <i>Neil Payne</i>
Position: Product Manager		
Place & Date: Birmingham, UK, Jun 1 2017		
on do dk en es fr it nl no pt ro se si pl		

Declared Performance

Declaration of Performance
DOP-EXL259

without compromise.

1
Unique identification code of the product type:

100-043

2
Type, batch or serial number or any other element allowing identification of the construction product as required:

The type number of 100-043 : see the print on the cable or sticker on the box

3
Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:

Supply of electricity and communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke

4
Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(2):

Excel
Excel House
Junction Six Industrial Estate
Electric Avenue, Birmingham, UK, B6 7AJ
Tel : +44 (0)121 326 7557
Fax : +44 (0)121 336 1537
E-mail : CPR@excel-networking.com

5
Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2):

N/A

6
System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V:

System 3

7
In case of the declaration of performance concerning a construction product covered by a harmonized standard:

Notified product certification body No. 2061 performed the determination of product type.

8
Declared performance:

Essential characteristics	Performance	Harmonised technical specification
Reaction to fire	Eca	BS EN 50575 2014+A1 2016
Dangerous substances	None	

The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8.
This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

Name: Neil Payne

Position: Product Manager

Signature



Place & Date: Birmingham, UK, Jun 1 2017

on
dk
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es
fr
iv
nl
no
pt
se
pl

Sign off by authorized representative

Declaration of Performance

DOP-EXL259



1

Unique identification code of the product type:

100-043

2

Type, batch or serial number or any other element allowing identification of the construction product as required:

The type number of 100-043 : see the print on the cable or sticker on the box

3

Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:

Supply of electricity and communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke

4

Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(2):

Excel
Excel House
Junction Six Industrial Estate
Electric Avenue, Birmingham, UK, B6 7AJ
Tel : +44 (0)121 320 7557
Fax : +44 (0)121 338 1537
E-mail : CPR@excel-networking.com

5

Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2):

N/A

6

System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V:

System 3

7

In case of the declaration of performance concerning a construction product covered by a harmonized standard:

Notified product certification body No. 2061 performed the determination of product type.

8

Declared performance:

Essential characteristics	Performance	Harmonised technical specification
Reaction to fire	Eca	BS EN 50575 2014+A1 2016
Dangerous substances	None	

+

The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8.
This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

Name: Neil Payne

Position: Product Manager

Signature

Place & Date: Birmingham, UK, Jun 1 2017

en

de

dk

es

fr

it

nl

no

pl

pt

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si

pl

Validity Statement from Manufacturer

The Label



Excel Networking
Excel House, Junction 6 Industrial Estate
Electric Avenue
Birmingham, B6 7JJ
UK
17
DOP-EXL691

EN 50575:2014+A1:2016
190-073

Supply of communication in buildings and other
civil engineering works with the objective of
limiting the generation and spread of
fire and smoke

Reaction to Fire: B2ca

Additional Requirements

S1a,d0,a1

Dangerous substances: none


Excel Networking Excel House, Junction 6 Industrial Estate Electric Avenue Birmingham, B6 7JJ UK 17 DOP-EXL691
EN 50575:2014+A1:2016 190-073 Supply of communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke Reaction to Fire: B2ca Additional Requirements S1a,d0,a1 Dangerous substances: none

CE Mark


Excel Networking Excel House, Junction 6 Industrial Estate Electric Avenue Birmingham, B6 7JJ UK 17 DOP-EXL691
EN 50575:2014+A1:2016 190-073 Supply of communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke Reaction to Fire: B2ca Additional Requirements S1a,d0,a1 Dangerous substances: none

ID of Notified Body

 
Excel Networking Excel House, Junction 6 Industrial Estate Electric Avenue Birmingham, B6 7JJ UK 17 DOP-EXL691 
EN 50575:2014+A1:2016 190-073 Supply of communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke Reaction to Fire: B2ca Additional Requirements S1a,d0,a1 Dangerous substances: none

Manufacturer Name & Address

 
Excel Networking Excel House, Junction 6 Industrial Estate Electric Avenue Birmingham, B6 7JJ UK  DOP-EXL691
EN 50575:2014+A1:2016 190-073 Supply of communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke Reaction to Fire: B2ca Additional Requirements S1a,d0,a1 Dangerous substances: none

Year that product first passed testing

 
Excel Networking Excel House, Junction 6 Industrial Estate Electric Avenue Birmingham, B6 7JJ UK 17 DOP-EXL691 
EN 50575:2014+A1:2016 190-073 Supply of communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke Reaction to Fire: B2ca Additional Requirements S1a,d0,a1 Dangerous substances: none

DOP Number

 
Excel Networking Excel House, Junction 6 Industrial Estate Electric Avenue Birmingham, B6 7JJ UK 17 DOP-EXL691
 EN 50575:2014+A1:2016 190-073 Supply of communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke Reaction to Fire: B2ca Additional Requirements S1a,d0,a1 Dangerous substances: none

Reference to relevant harmonized Standard

 
Excel Networking Excel House, Junction 6 Industrial Estate Electric Avenue Birmingham, B6 7JJ UK 17 DOP-EXL691
EN 50575:2014+A1:2016 190-073  Supply of communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke Reaction to Fire: B2ca Additional Requirements S1a,d0,a1 Dangerous substances: none

Unique Identifier or Part Number

 
Excel Networking Excel House, Junction 6 Industrial Estate Electric Avenue Birmingham, B6 7JJ UK 17 DOP-EXL691
EN 50575:2014+A1:2016 190-073 Supply of communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke  Reaction to Fire: B2ca Additional Requirements S1a,d0,a1 Dangerous substances: none

Intended Use

 
Excel Networking Excel House, Junction 6 Industrial Estate Electric Avenue Birmingham, B6 7JJ UK 17 DOP-EXL691
EN 50575:2014+A1:2016 190-073 Supply of communication in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke Reaction to Fire: B2ca Additional Requirements  S1a,d0,a1 Dangerous substances: none

Declared Performance

 Please note that it is not possible to put a CE mark on the cable due to the minimum size requirement of the logo. If any product is found to have one it should be seriously questioned as it may be counterfeit product.



Post Brexit we have a new system to replace CE Marking:

UKCA – UK Conformity Assessed

- All the testing and implementation will remain the same
- BS6701 remains applicable
- Marking/Labels will also have the same rules
- Conformity Assessment must be carried out by a UK Assessment Body

- All requirements regarding testing and standards used for the testing are exactly the same as the initial CPR
- The only things that change are the documentation and who is allowed to complete the assessment. We will now see a DOC (Declaration of Conformity) rather than the previous DOP
- The Assessment Body must be based in the UK and accredited with UKAS

The key problem that is seen at the moment is the number of assessment bodies available. With the initial CPR testing we had a pool of 16 across Europe that could be used. We now only currently have a maximum of 3 (04/2021) and not all of them capable to carry out System 1+ testing. This will lead to potential bottlenecks and the possibility of product shortages.

Northern Ireland has a slightly modified scheme. If product comes from outside the UK, it can continue to carry the CE mark and follow the same rules under the original CPR. However, if product is manufactured in the UK, it must carry both the CE mark and a new UKNI marking.

The image shows the UKNI marking logo, which consists of the letters 'UK' stacked above the letters 'NI' in a bold, black, sans-serif font. The letters are large and widely spaced, with the 'UK' and 'NI' each occupying their own column.

Useful Resources

There are a number of helpful resources available on the Excel website and Youtube channel to help to further explain the impact of CPR and the various Euroclasses and classifications.

CPR Infographic

Our infographic provides useful information about CPR and the BS6701:A1.

[VIEW NOW](#)

Excel Encyclopaedia

Chapter 5 of the Excel Encyclopaedia is dedicated to CPR and provides further detail into the requirements.

[VIEW NOW](#)

CPR Pocket Guide

Our pocket guide provides a concise overview of CPR and defines the key points that you should be aware of.

[VIEW NOW](#)