YOUR GUIDE TO UNDERSTANDING CPR

WITH EXCEL NETWORKING SOLUTIONS

ISSUE 2 – UPDATED JANUARY 2018

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WHAT IS CPR?

In July 2017 the original Construction Product Directive was expanded to include performance specifications relating to how a cable reacts to fire. The aim of the revisions to the legislation was to harmonise these specifications across all EU member states through a universal classification structure, known as Euroclasses.

The classification structure includes seven Euroclasses (from A to F) where A-class cables have the least reaction to fire, and F the most. Other considerations within the Euroclass structure are heat release, smoke production, light transmittance, flaming droplets and acid gas production.

WHEN WILL THIS HAPPEN?

The period of "Co-Existance" began on 1st June 2016 and operated for 12 months. From 1st July 2017, cables that were within scope and placed onto the EU market needed to meet CPR requirements. Products in the market prior to 1st July 2017 and not CE-marked could be sold and installed without breaching CPR, however anything placed in the market after this date must adhere to the regulation.

On 30th November 2017, the British Standards Institute published an amendment to the widely used BS6701 standard under the reference BS6701:2016+A1:2017. This amendment aimed to assist the market in the specification of Euroclasses from the aforementioned seven options.

WHY THE UPDATE?

Every year, many people die or are seriously injured as a result of building fires across the European Union. In 2015/16 in the UK alone, 17% of building fires were caused by Structures and Fittings within a building. Proportionally, 10% of casualties and 4% of deaths were caused by fire as a result of structures and fittings* hence the importance of ensuring that all permanently installed cables are regulated to be as safe as possible to protect lives. Ultimately the objective of CPR is to improve building safety by creating a common set of performance characteristics at national level to ensure everyone in the supply chain complies with the same set of standards.

CPR is key for saving lives, helping to provide a safer environment by creating maximum timeframes for people to evacuate a building in the event of a fire.

**(Source: FIRE0604: Primary fire fatalities and casualties by material responsible for development of fire, Gov.uk, July 2017).*

WHICH PRODUCTS ARE AFFECTED?

Any cable which is deemed to be permanent once installed is within the scope of CPR, covering power, data and communications cables. In the case of data and communications cables, copper, fibre, coax, and multi-conductor cables are covered, with the exception of patch leads.

WHO IS AFFECTED?

It is the legal responsibility of each layer of the supply chain, from manufacturer through distribution, to specifier and installer of the products in scope to ensure market compliance with CPR.
These are summarised below:

Manufacturers

- Ensure that products are tested and classified.
- Ensure that the Declaration of Performance (DOP) is made available to the purchaser.
- Ensure that the product label carries the appropriate CE-Mark to EN 50575 standard, Euroclass, DOP ID, Notified Body ID and Scheme of Assessment.

Distributors

- Ensure that cable supplied is accompanied with all required regulatory documents.
- Ensure not to supply any product that they deem not to conform to its declared performance.
- Ensure that products they believe do not meet either/both CPR or country specific minimum Euroclass requirements are withdrawn from the market.
- Ensure product traceability is transparent and documentation such as DOPs are easily and freely accessible via web sites and catalogues.
- Alert authorities to any cables they believe are being sold in the market that do not meet either/both CPR or country specific minimum Euroclass requirements.
- Store and transport cables as not to ruin conformity.

Specifiers

Ensure technical specifications and tenders clearly state the required minimum Euroclass appropriate to the country or vertical market minimum requirement, as determined by regulators, standards bodies, or client.

In the UK the minimum Euroclass is defined in BS6701:2016 +A1:2017 and is stated as Cca, S1b, d2, a2.

Installers

Ensure that all installed cable is correctly marked and accompanied with correct DOP.

Ensure technical specifications and tenders requirements are met, adhering to the minimum Euroclass appropriate to the country or vertical market minimum requirement, as determined by regulators, standards bodies, or client.

If in doubt, contact the distributor or manufacturer for advice.

CPR CHARACTERISTICS

The CPR update means performance tests on a cable's reaction to fire will now be performed on; flame spread, heat release, smoke production, light transmittance, flaming droplets and acidity. Cables will be categorised according to their performance level denoted by unique classification codes. In general the higher the performance class the higher the cable cost, due to differences in materials used and cable design, as has previously been seen when comparing PVC and LSOH cables.

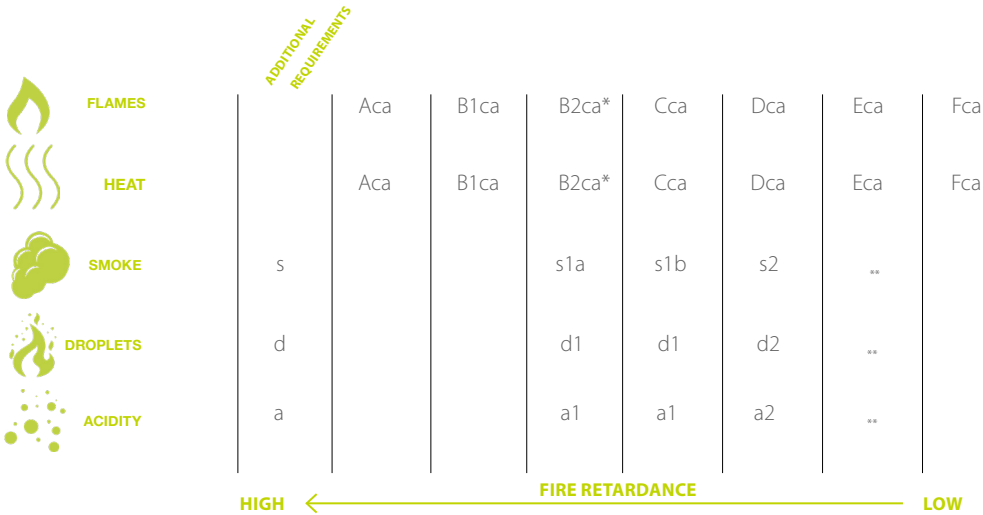
FLAMES

HEAT

SMOKE

DROPLETS

ACIDITY

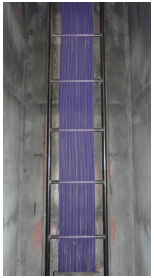
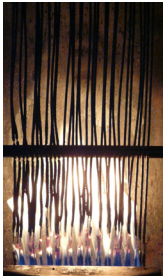
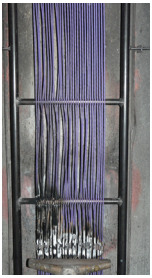


The above categorisation elements will be specified to form a complete Euroclass reference for ordering and specification purposes, for example Cca, S1b, d1, a1.

** We do not expect that communication cables will ever be above B2ca*
*** No Requirement*
Please see Section 2 of the Excel Encyclopaedia to explain additional requirements: s1,s2,s3 / d0,d1,d2 / a1,a2,a3

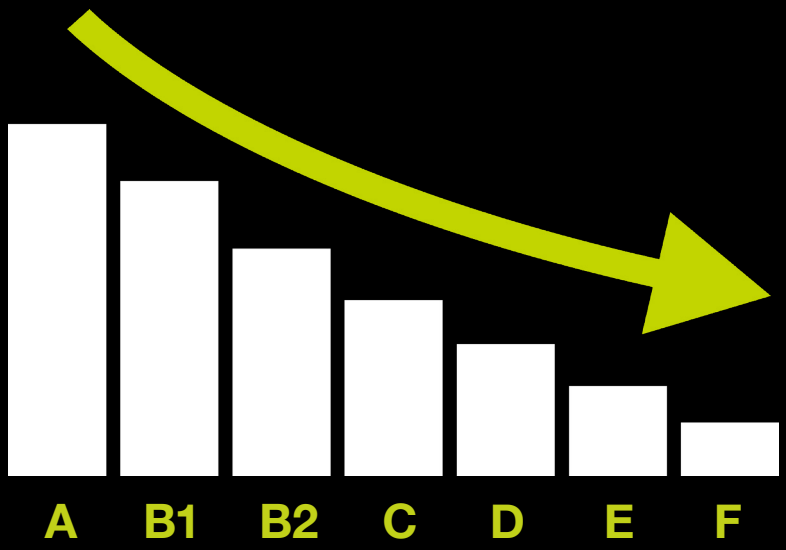
THE IMPORTANCE OF CHOOSING A EUROCLASS

When selecting a CPR-compliant cable, it is important to consider which Euroclass to select. These images show the difference between two differently classified cables during a 20 minute vertical test, which gives a strong indication of the retardance to fire and the impact that a fire could cause.

Time	Before Test	10 minutes	After test
Dca Example			
B2ca & Cca Example			

EUROCLASS CRITERIA

Euroclass (ca)	Classification Criteria	Additional Criteria	Attestation of conformity system
A	EN ISO 1716 Gross heat of combustion		1+ Initial type-testing and continuous surveillance with audit testing of samples by 3rd party certification body factory production control (FPC) by manufacturer
B1	EN 50399 Heat release Flame spread EN 50575 Flame propagation	Smoke production* (s1a, s1b, s2, s3) EN50399/EN61034-2 Acidity (a1, a2, a3) EN50574 Flaming droplets (d0, d1, d2) EN 50399	
B2			
C			
D			3 Initial type testing by 3rd party laboratory FPC by manufacturer
E	EN 50575 Flame propagation		
F			4 Initial type testing and FPC by manufacturer

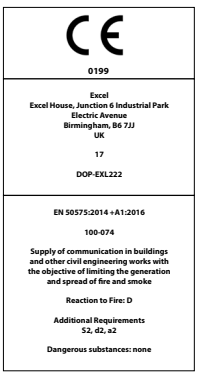

A
B1
B2
C
D
E
F

EUROCLASS BY COUNTRY

It is the responsibility of each EU member state to define the recommended minimum Euroclass for installations within its market. Respective requirements could depend on the type of building and potential risk based on usage and occupancy. Each country, local client and end users will specify their Euroclass requirements based on this guidance and/or local standards or regulation.

PROVING COMPLIANCE

The regulation defines clear process and requirements for proof of compliance to a specific Euroclass. Once independent verification has been received an item specific, Declaration of Performance (DOP) is issued and approval given to label product with specification, standards and DOP reference to enable traceability. All manufacturers and distributors MUST be able to provide this documentation, and provide correctly labelled product to comply.



CE

0199

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UK

17

DOP-EXL222

EN 50575:2014 +A1:2016

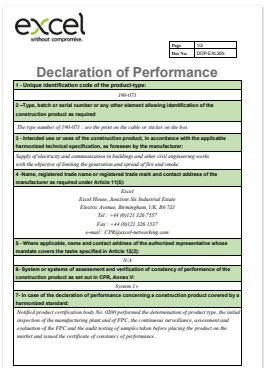
100-074

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: D

Additional Requirements
S2, d2, a2

Dangerous substances: none



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Declaration of Performance

1 - Unique identification code of the product-type:

100-073

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

The type number of 100-073 : 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(5):

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

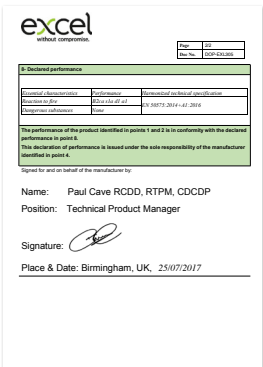
N/A

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

System 1+

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

Notified product certification body No. 0200 performed the determination of product type, the initial inspection of the manufacturing plant and of FPC, the continuous surveillance, assessment and evaluation of the FPC and the audit-testing of samples taken before placing the product on the market and issued the certificate of constancy of performance.



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8- Declared performance

Essential characteristics	*Performance*	*Harmonized technical specification*
Reaction to fire	*B2ca s1a d1 a1*	*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: Paul Cave RCDD, RTPM, CDCDP

Position: Technical Product Manager

Signature:

Place & Date: Birmingham, UK, *25/07/2017*

EXCEL NETWORKING SOLUTIONS' COMMITMENT

Our customers can rest assured that all products supplied by Excel into the EU market since July 2017 are CPR compliant.

We demonstrate this through certificates known as Declarations of Performance (DOPs), through labelling on product packaging, printing on cable jackets, or by product being placed on the market prior to this date.

When purchasing products in scope of CPR it is advisable to request suppliers to provide confirmation of compliance by means of a DOP or to demonstrate that the product was placed on the market prior to July 2017. Inability to meet either of these requests should cause alarm and we would recommend a 'proceed with caution' approach. Note that a DOP is a legal requirement if a product is claimed to meet, and have been independently tested, to a specific Euroclass.

A product should not be purchased if this claim is made and a DOP cannot be provided with matching part code and description to the part in question.

Excel has adopted a transparent approach to providing the market with relevant information, updating its product specification sheets and web content to include clear references to the Euroclass that each product meets, and DOPs for each item.

SUPPORT

Our expert sales teams can give you a clear vision of the products you need with the correct documentation, advice and installation tools.

CLARITY

A consistent labelling system across all Excel cabling products aim to satisfy the requirements of CPR by denoting ten specific parameters: the Excel logo and address details, the product part number, the CE marking, the year of initial certification, the classification of reaction to fire, the reference to the standard, the certification body, the ID of the Declaration of Performance and the intended use of the cable. This label layout is consistent across all infrastructure products supplied by Excel, showing all mandatory information making it easier to explain to customers.

READY

The Excel team have been preparing for the introduction of CPR since early 2016, as a result we are ready to meet multiple Euroclass and country specific minimum requirements, from Eca through to B2ca.

We have stock of unscreened, screened copper cables and multi and single mode fibre optic cables. We have already successfully delivered a number of UK and International projects to Cca class and above.

ON TIME

The previously mentioned BS6701:2016 +A1:2017 standard was published on 30th November 2017. Excel products across our range of copper and fibre solutions exceed the minimum requirement as we offer Cca, s1a, d1, a1 as standard. It is important when considering vendor offerings to ensure this full Euroclass is met and all required paperwork and labelling is in order.

For more information, please contact us on 0121 326 7557 or via email at cpr@excel-networking.com.

TAKE THE EXCEL CHALLENGE

Why not take the Excel Challenge and consider asking suppliers and those offering to assist in writing tenders or specifications a few straightforward "yes/no" questions?

Do you have copper and fibre cabling that meets or exceeds Euroclass CCa, S1b, d2, a2 which is the minimum standard defined in BS6701:2016+A1:2017?
(Note - S1 is not compliant)

Excel offers Category 6 and 6_A screened and unscreened copper cables and tight buffered fibre optic cables that meet or exceed the above specification.

If you have products that meet this specification can you provide data sheets and the legally required Declaration of Performance (DOP) which is based upon the Notified body test report & certificate?

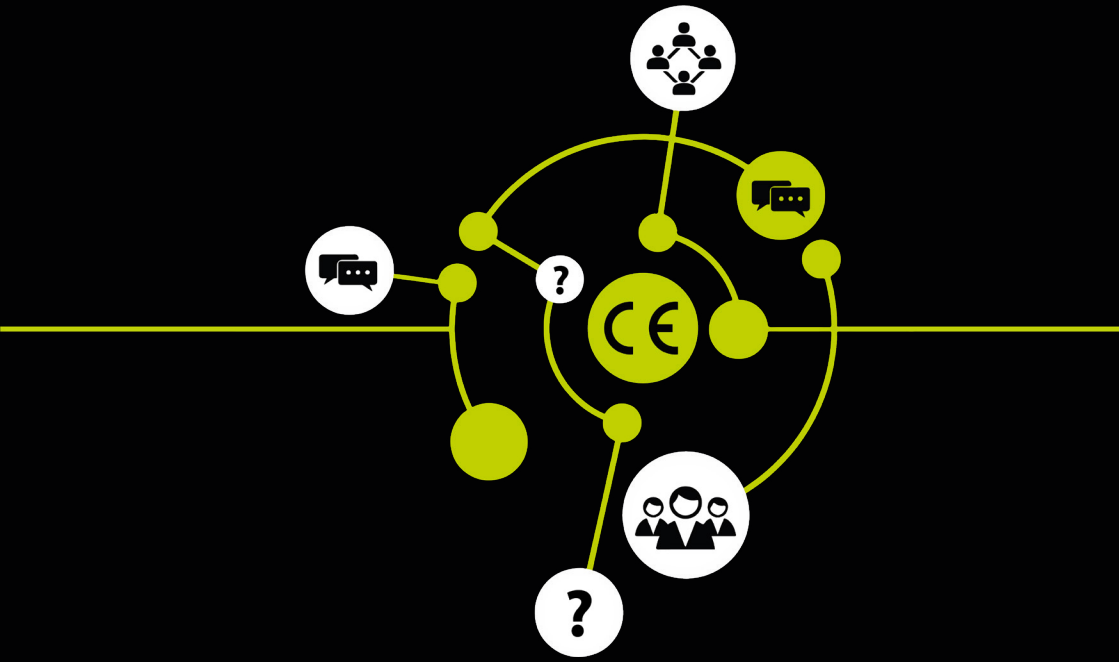
Excel data sheets and DOPs are freely available on our website.

Do you have stock of cables that as minimum meet Cca, S1b, d2, a2?
(Note – Companies answering positively to Question 1 may not have invested in stocks, creating potential project delays)

Excel has large stocks of all products offered that meet or exceed the above specification and have successfully delivered a number of compliant projects with others in progress.

What uplift, if any, are you applying to tight buffered fibre optic cables that meet Cca, s1b, d2, a2 compared to previously supplied LS0H cables?

Excel offers – from stock – single and multimode tight buffered fibre cables which exceed the requirements of the standard with no cost uplift.



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