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# EC Cabling News

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## Information about CPR – the Construction Products Regulation

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Questions and answers about CPR.

Q: What is CPR?

A: CPR is short for *Construction Products Regulation* (EU 305/2011), part of the European Union legislation.

Q: Are cables in the scope of CPR?

A: YES!

Q: Do I need special marking and declarations for my cable?

A: YES – the cable must be *CE-marked*, and you must have a *Declaration of Performance* for reaction to fire and release of dangerous substances for your cable

Q: Can I do it all by myself?

A: NO – depending on the declared performance, the involvement of a *Notified Body* (Testing Laboratory or Product Certification Body) is required for the assessment

Q: WHEN do I have to be ready?

A: From **1 July 2017** cables for construction works shall be CE marked before being placed on the market in EU (CE marking possible from 10 June 2016)

Q: Can *DELTA* help me with testing and certification related to the CPR

A: YES!

For detailed information, see the following pages.

## Introduction

The Construction Products Regulation (CPR) from the European Union (EU) is getting more and more attention and awareness in the cabling market as the date for obligatory CE marking of cables for use in construction works gets closer. The objective of this edition of EC CablingNews is to explain/define some of the terms used in connection with the CPR, and to provide a short update on CPR with emphasis on cable related issues.

### What is CPR, Declaration of Performance, and CE marking?

CPR is short for the *Construction Products Regulation* (EU 305/2011), which is part of the European Union legislative framework supporting free movement of goods across the borders in the EU region. The CPR identifies a number of *basic requirements* that shall be met by products used in construction works (e.g. buildings, but also roads, bridges, etc.), some of which are “mechanical resistance and stability” (to avoid collapse etc.), “safety in case of fire” (impact on spread of fire, smoke generation, etc.), and “hygiene, health and the environment” (emission of dangerous substances, toxic gasses, etc.).

It should be noted that the CPR itself only defines the essential characteristics and basic requirements for construction products, whereas the detailed technical specifications to be applied to meet these requirements are found in so-called *harmonised standards*. Further, the assessment of performance of a construction product may require the involvement of a *Notified Body*<sup>1</sup> depending on the type of product and the declared performance. Only when the harmonised standards are available, and all the necessary steps in the assessment of the performance, including possible involvement of notified bodies, have been completed, the performance of the product in relation to the CPR can be declared. This is done by drawing up a *Declaration of Performance* and marking the product with a *CE mark*.

The *Declaration of Performance* (DoP) is a key part of the CPR and it provides information about the manufacturer, the product, the performance, and notified bodies used in the assessment (if applicable). Further, it specifies which system and which harmonised standards have been applied for the assessment. By making the DoP, the manufacturer is assuming legal responsibility for the conformity of the product to its declared performance.

The *CE mark* is a visible symbol placed on the physical product (or packaging) to indicate that the given product complies with EU legislation, and that it can be placed legally on the market in all the European Union countries. The CE marking is equivalent to a declaration from the manufacturer that the product complies to *all relevant* (CE marking) directives and regulations in EU, i.e. not only the CPR<sup>2</sup> and the detailed information about which directives, regulations, and standards are referenced and found in the associated Declaration of Performance (for CPR) or Declaration of Conformity (DoC, for other CE marking directives). It is the manufacturer's responsibility that *all necessary steps* have been completed (depending on product type and directives) before affixing the CE mark.

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<sup>1</sup> The Notified Body is an independent third party which has been authorised by the national authorities by one of the EU member states to perform the specified task.

<sup>2</sup> Other examples of CE marking directives are: The Low Voltage Directive, the EMC directive, the RoHS II directive.

## Why are cables in the scope of CPR?

Although cables are not traditionally considered a construction product, it has been affirmed long time ago that electrical cables (incl. data cables and optical fibre cables) for installation are subject to the CPR with reference to the following: They are permanently incorporated (installed) in the construction works (fixed installation), and they are important e.g. for the safety in case of fire (reaction to fire, spread of fire and smoke etc.). Additionally, the cables may have an impact on health and environment via the materials used.

## Standards and assessment procedures for cables in relation to CPR

The basic reference standard for cables and their performance with respect to fire under the CPR is:

- EN 50575:2014 + amendment A1:2016  
Power, control and communication cables - Cables for general applications in construction works subject to reaction to fire requirements

This standard specifies **reaction to fire** requirements, including test and assessment methods, and addresses also requirements for **release of dangerous substances** (cf. one of the essential characteristics of the CPR). Further it specifies requirements for **type testing**, **factory production control (FPC)**, and which system shall be used for **Assessment and Verification of Constancy of Performance (AVCP)**. EN 50575 defines a number of reaction to fire classes  $A_{ca}$ ,  $B1_{ca}$ ,  $B2_{ca}$ ,  $C_{ca}$ ,  $D_{ca}$ ,  $E_{ca}$ , and  $F_{ca}$  for which the applicable test methods are as presented in below table.

**Table 1 — Test methods for reaction to fire classes**

	Test methods				
	EN ISO 1716	EN 50399 <sup>a</sup>	EN 60332-1-2	EN 61034-2 <sup>c</sup>	EN 60754-2 <sup>c</sup>
<b>A<sub>ca</sub></b>	X	-	-	-	-
<b>B1<sub>ca</sub></b>	-	X <sup>b</sup>	X	X	X
<b>B2<sub>ca</sub></b>	-	X	X	X	X
<b>C<sub>ca</sub></b>	-	X	X	X	X
<b>D<sub>ca</sub></b>	-	X	X	X	X
<b>E<sub>ca</sub></b>	-	-	X	-	-
<b>F<sub>ca</sub></b>	No performance determined				
a) EN 50399 is a test method for bunched cables under fire conditions, similar, but not identical, to the IEC 60332-3-series. It has additional requirements for testing of heat release and smoke production during the test. b) Special conditions of test apply in EN 50399 to Class B1 <sub>ca</sub> . c) Additional classification tests.					

For reaction to fire classes  $A_{ca}$ ,  $B1_{ca}$ ,  $B2_{ca}$ , and  $C_{ca}$ , the **AVCP system 1+** shall be applied, and the involvement of a **Notified Product Certification Body** is required. The tasks of the certification body include type testing, initial – and continuous – inspection and evaluation of the FPC, as well as audit testing of samples. The manufacturer on the other hand is responsible for establishing and maintaining the FPC, and for sample testing at the plant in accordance with a prescribed test plan.

For reaction to fire classes  $D_{ca}$  and  $E_{ca}$ , the **AVCP system 3** shall be applied, and the involvement of a **Notified Testing Laboratory** is required for the initial type testing. The manufacturer is responsible for the FPC as for system 1+, but with no explicit requirement for testing plans and sample testing at the plant.

For reaction to fire class  $F_{ca}$ , the **AVCP system 4** shall be applied. Although no reaction to fire performance is declared for this class, the manufacturer still has to ensure that other requirements in the standard are met, e.g. concerning release of dangerous substances and FPC. The manufacturer may carry out the necessary type

testing and assessment himself, i.e. no notified body is required, and as for the other systems, the manufacturer is responsible for the FPC.

For release of dangerous substances, EN 50575 specifies use of AVCP system 3 (introduced by Amendment 1 in 2016). This means, that also for the assessment of this characteristic, type testing by a notified testing laboratory is required.

### Status and important dates

The CPR is already in force (has been since 1 July 2013), and before this the CPD (Construction Product Directive) applied. However, the preconditions for assessing and declaring the performance of *cables*, and thus for CE marking the cables under the CPR, were not in place until June 2016.

The reference standard for reaction to fire performance of cables, EN 50575, was published – as a Cenelec standard – in September 2014. However, it was not until 10 July 2015, when it was published in the Official Journal of the EU, that it was formally recognised as a *harmonised standard* for the CPR with the following implementation dates (after revision June 2016):

- Date of applicability: 10 June 2016
- Date of the end of the co-existence period: 1 July 2017

This means, that from **10 June 2016** (and not before), cables *could* be CE marked under the CPR - with a given performance declared - by referencing the requirements of EN 50575. Note, that before CE marking the cable, the manufacturer shall ensure that *all the necessary steps* in the assessment procedure have been successfully completed – including possible involvement of notified bodies and drawing up a Declaration of Performance.

The date of the end of the co-existence period is date after which presumption of conformity must be based on EN 50575. From this date – **1 July 2017** - CE marking of cables (subject to CPR) is obligatory.

As mentioned above, the assessment procedure may involve a notified testing laboratory or a notified product certification body depending on which class of performance is declared.

### The role of DELTA and EC Cabling

DELTA is a notified body under the CPR for assessment of cables under AVCP system 3 (notified testing laboratory). That is, we offer the required, independent testing and assessment of the reaction to fire performance of cables. It should be noted that cables in this context cover data communication cables (including optical fibre cables), as well as electrical power cables and control cables.

We offer accredited testing of reaction to fire performance of cables according to EN 50575 which references the test standards EN 50399, EN 60332-1-2, etc. The results from these tests serve as basis for the reaction to fire classification report, which is issued in our role a notified testing laboratory, and which is required for the declaration of reaction to fire performance under the CPR.

DELTA is further in the process of becoming a notified product certification body and will – in due time – be able to offer factory inspections and assessment of factory production control acc. to AVCP system 1+ under the CPR.

We would be very happy to work closely with you on this important and critical topic. Please contact us for more information.