

PPC Broadband Fiber – The Construction Products Regulation (CPR - 305/2011/EN)

What is the Construction Products Regulation?

The CPR is a set of regulations that are harmonised across Europe for all products intended to be used permanently in construction.

The standard for cables, EN 50575:2014, defines the test standards for testing the 'Reaction to Fire' performance of a cable and also the method of classifying this performance.

Why CPR?

The main objective of the CPR is to increase safety in buildings and ensure the health protection of individuals.

It is intended to enable easy comparison of different products so that the most suitable for a specific installation may be selected.

It does not say when and where products are used, instead it defines the way a product is 'placed on the market', the way the products are assessed and tested, how the performance of the products is declared and the conformance system of assessment.

When?

The majority of the CPR came into force on the 1st of July 2013

The CPR Standard for cables was implemented on the 1st of July 2016.

From the 1st of July 2017 Cables, where covered by the CPR, must have a European Classification under the EN50575:2014 standard otherwise they cannot legally be sold in the European market.

What does it mean?

All manufacturers of Copper or Fiber Optic Cables who are placing them on the European market must **Test, Classify** and **Label** to the CPR and the cable standard:-

Testing

Testing must be performed by an authorised body or laboratory.



The main criteria of Flame propagation and heat release is tested according to EN 60332-1-2 (small scale) and EN 50399 (large scale) burn testing.

There are additional criteria of smoke production, corrosivity and flaming droplets.

Euro Classification (ca)	Classification criteria	Additional criteria	Assessing & examining the consistency of the performance system
A	EN ISO 1716 Gross heat of combustion		AVCP SYSTEM 1+ Verification documents: <ul style="list-style-type: none"> • Type testing • Regular works Audits • Regular sampling of Ongoing production
B1	EN 50399 Flame Propagation & Heat release	Smoke production (s1a, s1b, s2, s3) (EN 50399, EN 61034-2) Acidity / Corrosivity (a1, a2, a3) (EN 50267-2-3)	AVCP SYSTEM 3 Verification documents: <ul style="list-style-type: none"> • Type testing
B2			
C			
D	EN 60332-1-2 Flame Propagation	Flaming droplets (d0, d1, d2) (EN50399)	
E	EN 60332-1-2 Flame Propagation		
F			AVCP SYSTEM 4 No verification documents



Classification

Classification is based on the use of Euro classes, uniform assessment classifications that reflect real life environments for building products. For cables the Euro classes define the **Reaction to Fire performance**.

The relevant Euro classes for the CPR, ranking highest to lowest are: A_{ca}; B1_{ca}; B2_{ca}; C_{ca}; D_{ca}; E_{ca} and F_{ca}.

Only four of these are relevant to the data/telecoms cabling industry: B1_{ca}; B2_{ca}; C_{ca}; D_{ca}; and E_{ca} because class A_{ca} is effectively 'non-flammable' and class F_{ca} is 'easily flammable' (for cables having no resistance to fire propagation).

The authorised notified body or notified laboratory issues a certificate of conformity to the applicable Euro class.

Labelling

CE marking for cables is mandatory. The CE mark must be on the labelling of the product (reel) and the packaging. The labelling must also reference the Declaration of Performance (DoP) number, the Declared Performance (class B_{ca}, C_{ca}, D_{ca} or E_{ca}), a dated reference of the harmonised standard, ID number of the notified body or notified laboratory used and the Intended product use.



The marking on the cable itself must include a dated reference of the harmonised standard and identify the CPR class (B_{ca}, C_{ca}, D_{ca} or E_{ca}).



The Declaration of Performance (DoP)

The DoP must be based on the test results of a Notified Body or Notified Laboratory.

It includes the following information:

	Declaration of Performance	
<p>DoP number: xxx xxx xx</p> <p>Part number: xxx-xxx-xxx-xxx</p> <p>Intended Use: Supply of communications in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke.</p> <p>Manufacturer: PPC Broadband Fiber Ltd. Unit 1, The Airfield, Parham, Suffolk, IP139AF, UK</p> <p>AVCP System Applied: 3</p> <p>Standard: EN 50575:2014</p> <p>Notified Body Code: NB2700</p> <p>Declared Performance: Class E_{ca}</p>		

- The CE mark
- Declaration of Performance number
- A unique ID for the specific product
- Intended Use
- The manufacturer’s information.
- The AVCP (Assessment and Verification of Constancy of Performance) system applied
- A dated reference of the harmonised standard
- The notified body or notified laboratory used
- The Declared Performance (class B_{ca}, C_{ca}, D_{ca} or E_{ca})



CPR rated Optical Fiber cables from PPC

PPC Broadband Fiber Ltd. has a range of class E_{ca} rated cables, with Fiber counts from 1 to 24 in Multimode: OM3 & OM4 and Singlemode: /G.657A1 and G.657A2. Unless otherwise specified all of the cables listed below use G.657A1 Singlemode Fiber. The 1-Fiber and 2-Fiber cables are also used in our Miniflex QuikPush cable range of pushable customer drops.

Cable code	CPR - EN 50575 Euro Classification	Fiber count	Cable Size mm	PBIO material (FR-PBT)	PEMX material (FR-PE)
MX-012-PBIO-WHT-A1-250	Class E _{ca}	1	2 mm	X	
MX-013-PBIO-WHT-A1-250	Class E _{ca}	1	3mm	X	
MX-013-PBIO-WHT-A2-900	Class E _{ca}	1	3mm	X	
MX-022-PBIO-WHT-A1-250	Class E _{ca}	2	2mm	X	
MX-023-PBIO-WHT-A1-250	Class E _{ca}	2	3mm	X	
MX-042-PBIO-WHT-A1-250	Class E _{ca}	4	2mm	X	
MX-043-PBIO-WHT-A1-250	Class E _{ca}	4	3mm	X	
MX-063-PBIO-WHT-A1-250	Class E _{ca}	6	3mm	X	
MX-083-PBIO-WHT-A1-250	Class E _{ca}	8	3mm	X	
MX-123-PBIO-WHT-A1-250	Class E _{ca}	12	3mm	X	
MX-124-PEMX-WHT-A1-250	Class E _{ca}	12	4mm		X
MX-244-PEMX-WHT-A1-250	Class E _{ca}	24	4mm		X

We are finalising testing of cables for class D_{ca} and C_{ca} utilising existing materials and cable designs. We will update this leaflet during Q4 2017 with these additional cables.

We have a number of new materials and cable designs undergoing trial, testing and evaluation for the higher classes of C_{ca} and B_{ca}. Further bulletins will be issued in due course.

Along with these new European CPR rated cables, PPC Broadband Fiber Ltd. has an extensive range of cables and Microducts that are UL Rated for General Purpose, Riser and Plenum environments in the United States and Canada.