

Construction Products Regulation "CPR"

Norm EN 50575 for Cables and what it means to Reka's customers



First and foremost: You don't have to worry!

- ✓ All our cables manufactured before and after the new regulations can be used as before, we take care that all our cables comply with existing and new regulations!



- The aim is to ensure that all construction products used in permanent constructions in EU are assessed, classified and approved by the same criteria
- Cables are just a small part of the whole regulation
- Product standard EN 50575 regulates cables
 - This regulation **does not concern all cables**. For example fire protection cables will get their own regulations later.

EU Regulation No 305/2011



What's the purpose?

To harmonize the CE-markings on construction products in the EU and thus

- ✓ ensuring free movement of products in the EEA and removing unnecessary obstacles of trade
- ✓ demonstrating that construction products fill the basic requirements of the regulation anywhere in the EU area



Which cables are included?

All **cables** sold as **construction products**, regardless of voltage, that are intended for

- ✓ permanent installation in buildings and
- ✓ similar construction works in the society

→ The EN 50575 regulation defines **ONLY** the **reaction-to-fire performance classes** of the applicable cables (and how to test, define and communicate them)



Which cables are NOT included?

- X** Cables for the **electricity distribution network**, such as low and mid voltage underground cables
- X** Cables which **function under fire** intended for fire alarms; fire extinguishing, alarm and safety equipment
- X** Cables which are **not** intended to be used as **construction products** (in construction sites)



What will be tested?

BEFORE:

Previous classifications were narrower and focused solely on flame spread.



Flame spread



NOW:

- The standard defines a new testing method for cables' reaction-to-fire performance.
- It will be uniform in Europe and test:



Heat release



Smoke production



Flaming droplets



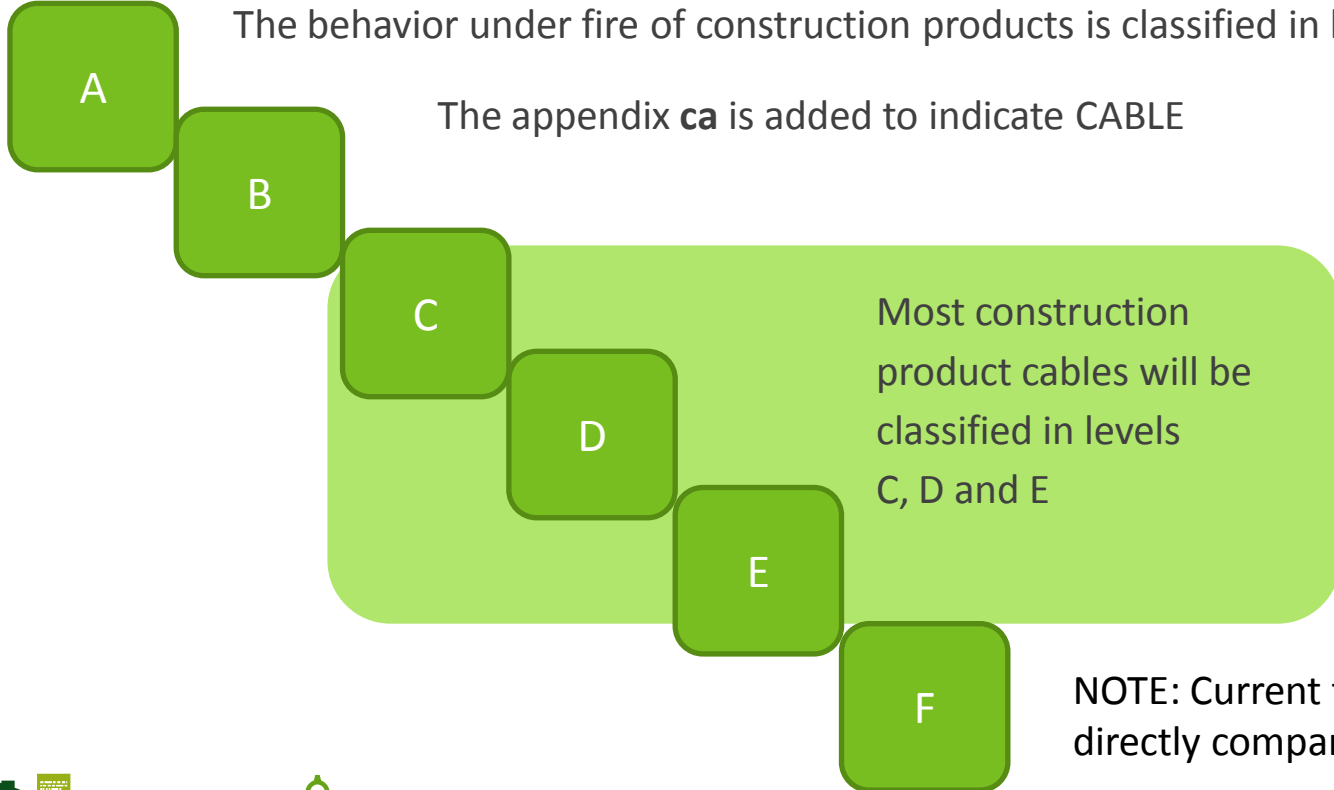
Acidity

- All tests have to be conducted in approved independent testing laboratories
- The test results define to which CPR class the cable type is placed. Communicating this is one of the basic requirements for the CE marking of construction products.



New classifications

The behavior under fire of construction products is classified in levels A...F



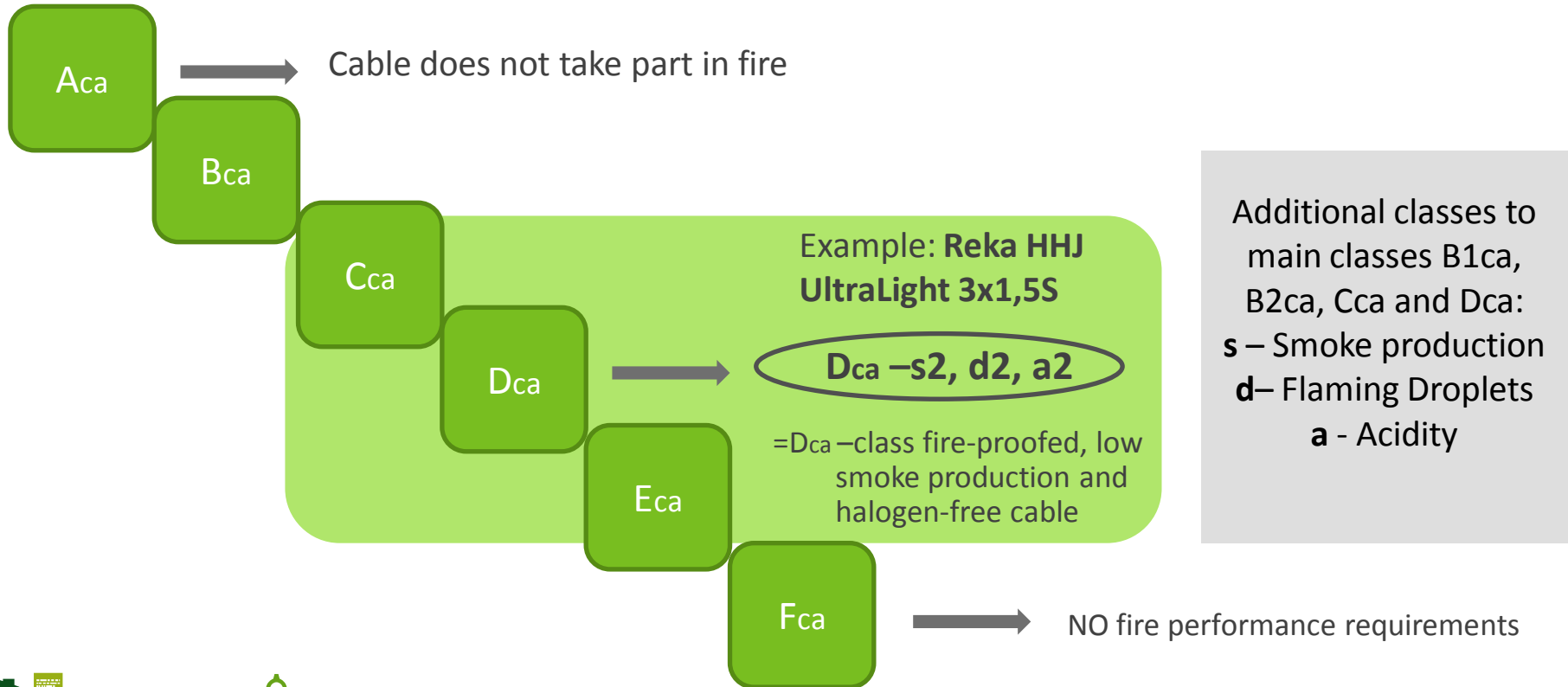
Additional classes are allowed for main classes B1ca, B2ca, Cca and Dca:

- s** – Smoke production
- d** – Droplets
- a** – Acidity

NOTE: Current fire tests and classes are not directly comparable with the new ones!



New classifications - examples



EN 50399 testing principles

Main classes:

A_{ca} – F_{ca}

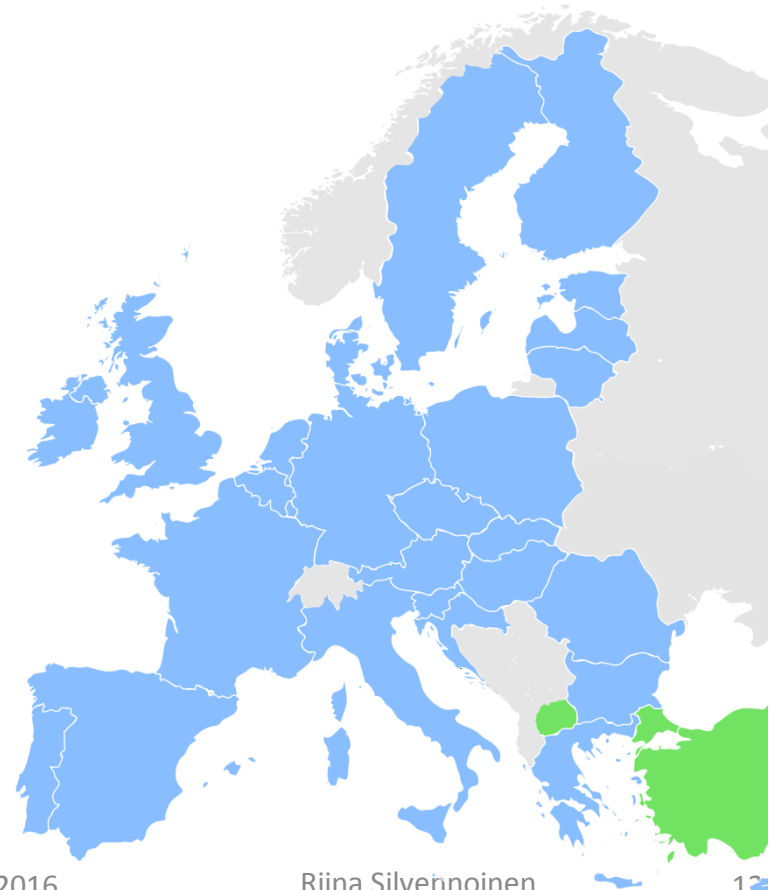
Additional classes:

- Smoke release (s1, s2, s3)
- Flaming droplets (d0, d1, d2)
- Acidity (a1, a2, a3)

Class	Test method(s)	Classification criteria	Additional classification
A _{ca}	EN ISO 1716	PCS ≤ 2,0 MJ/kg ⁽¹⁾	
B1 _{ca}	EN 50399 (30 kW flame source)	FS ≤ 1.75 m <i>and</i> THR _{1200s} ≤ 10 MJ <i>and</i> Peak HRR ≤ 20 kW <i>and</i> FIGRA ≤ 120 W s ⁻¹	Smoke production ^(2,5) and Flaming droplets/particles ⁽³⁾ and Acidity ^(4,7)
	EN 60332-1-2	H ≤ 425 mm	
B2 _{ca}	EN 50399 (20,5 kW flame source)	FS ≤ 1.5 m <i>and</i> THR _{1200s} ≤ 15 MJ <i>and</i> Peak HRR ≤ 30 kW <i>and</i> FIGRA ≤ 150 W s ⁻¹	Smoke production ^(2,5) and Flaming droplets/particles ⁽³⁾ and Acidity ^(4,7)
	EN 60332-1-2	H ≤ 425 mm	
C _{ca}	EN 50399 (20,5 kW flame source)	FS ≤ 2.0 m <i>and</i> THR _{1200s} ≤ 30 MJ <i>and</i> Peak HRR ≤ 60 kW; <i>and</i> FIGRA ≤ 300 W s ⁻¹	Smoke production ^(2,6) and Flaming droplets/particles ⁽³⁾ and Acidity ^(4,7)
	EN 60332-1-2	H ≤ 425 mm	
D _{ca}	EN 50399 (20,5 kW flame source)	THR _{1200s} ≤ 70 MJ; <i>and</i> Peak HRR ≤ 400 kW; <i>and</i> FIGRA ≤ 1300 W s ⁻¹	Smoke production ^(2,6) and Flaming droplets/particles ⁽³⁾ and Acidity ^(4,7)
	EN 60332-1-2	H ≤ 425 mm	
E _{ca}	EN 60332-1-2	H ≤ 425 mm	
F _{ca}	No performance determined		

Country-specific regulations

- The required classes Aca – Fca for reaction-to-fire of cables will be defined independently by the national authorities of each country
- This way each country can determine their desired levels of safety that comply with national regulations and local construction methods and traditions



Timetable

- Transition period: June 2016 – July 2017
 - Manufacturer CAN during this period release on the market cables with the new CE marking
- Mandatory after July 2017
 - Manufacturer HAS TO have the new CE marking and CPR classes marked on the cable
- **Cables with old markings in customers' stock and shops can be still used after July 2017!**




What does this mean to us, the manufacturer?

We are obliged to

- ✓ Conduct additional testing of all applicable existing and new cable types according to the new regulations
- ✓ Provide the regulated information:
 - Place CE-marking within product information
 - Mark the reaction-to-fire performance class on the cable
 - Place the Declaration of Performance available for everyone (eg. on website)

Example of a product label according the new regulation:

 XXXX	<i>CE marking, consisting of the "CE"-symbol</i>
Reka Cables Ltd, Kaapelikatu 2, FI-05800 Hvinkää, Finland	<i>Identification number of the product certification body</i>
16	<i>Name and the registered address of the manufacturer, or identifying mark</i>
<i>(To be given by the manufacturer)</i>	<i>Last two digits of the year in which the marking was first affixed</i>
EN 50575:2014	<i>Reference number of the DoP</i>
HHJ Ultralight 3x1,5 S	<i>No. of European Standard applied, as referenced in OJEU</i>
Supply of electricity in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke	<i>Unique identification code of the product-type</i>
<i>Reaction to Fire: D2_{ca}-s2,d2,a2</i>	<i>Intended use of the product as laid down in the European Standard applied</i>
Dangerous substances: none	<i>Class of performance</i>



What does this mean to you, our customer?

- We, the manufacturer, provide you tested, safe cables that fulfill the regulations and
 - Widened CE-marking on package
 - CPR class printed on cable
 - Declaration of Performance (DoP) in your language
- After July 2016 you are **able to use cables with the new CE marking**
- After July 2017 all you need is to **be aware of the minimum requirements (CPR classes) for the products in your projects**



REMEMBER:

You don't have to worry!

- ✓ All our cables manufactured before and after 1.7.2017 can be used as before, we take care that all our cables comply with existing and new regulations!

