LEONI technical report

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Statement on the European Construction Products Regulation

The European standard EN 50575:2014: **"Power, control and communication cables – Cables for general applications in construction works subject to reaction to fire requirements"** came into force on 10 June 2016.

Cables falling under the Construction Products Regulation (CPR) can thus be provided with a CE marking according to EN 50575 as of this date or must bindingly be provided with it on completion of the transitional period on 1 July 2017.

As mentioned above, this regulation only applies to cables which are permanently installed in buildings, for example openly on platforms and in conduits or flush-mounted, and which are part of the infrastructure of the building.

Cables which fall under the CPR can be divided into the following fire classes (see table) according to EN 50575. In Germany, the implementation of the safety standards in buildings with high security requirements and the adaptation of the current building regulations to the CPR is the responsibility of the individual German federal provinces. This means that, for each German federal province or EU member country, different fire class demands can be made on the cables in each application.

The following do not fall under the CPR:

- **Cables specially intended for industrial use in industrial processes (for example instrumentation cables on the basis of EN 50288-7)**
- **Cables introduced into buildings for a short length as a feed line**
- **Cables with functional integrity and insulation integrity (not yet at present)**
- **Cables within machines**
- **Cables for lifts**
- **Cables connecting a terminal device with the building via connectors**

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Fire classes according to EN 13501-6 for cables in buildings according to EN 50575

(Main) Class	Classification criteria	Test method & Burner capacity		Requirement	Additional classification & Test method	
A_{ca}		EN ISO 1716		Combustion heat ≤ 2.0 MJ/kg		
$B1_{ca}$	Vertical flame propagation (FS)	EN 50399 30 kW Flamme	30 kW flame, cable bundle test	Test length ≤ 1.75 m, heat release (1200 s) ≤ 10 MJ, max. heat release ≤ 20 kW, heat release rate ≤ 120 W/s	s…, a…., d….	EN 61034-2, EN 50267-2-3, EN50399
	Vertical flame propagation	EN 60332-1-2	1 kW individual cable test	Test length 0.425 m		
$B2_{ca}$	Vertical flame propagation (FS)	EN 50399	20.5 kW flame, cable bundle test	Test length ≤ 1.5 m, heat release (1200 s) ≤ 15 MJ, max. heat release ≤ 30 kW, heat release rate ≤ 150 W/s	s…, a…., d….	EN 61034-2, EN 50267-2-3, EN50399
	Vertical flame propagation	EN 60332-1-2	1 kW Individual cable test	Test length ≤ 0.425 m		
C_{ca}	Vertical flame propagation (FS)	EN 50399	220.5 kW flame, cable bundle test	Test length ≤ 2.0 m, heat release (1200 s) ≤ 30 MJ, max. heat release ≤ 60 kW, heat release rate ≤ 300 W/s	s…, a…., d….	EN 61034-2, EN 50267-2-3, EN50399
	Vertical flame propagation	EN 60332-1-2	11 kW individual cable test	Test length ≤ 0.425 m		
D_{ca}	Vertical flame propagation (FS)	EN 50399	20.5 kW flame cable bundle test	Heat release (1200 s) ≤ 70 MJ, max. heat release ≤ 400 kW, heat release rate ≤ 1300 W/s	s…, a…., d….	EN 61034-2, EN 50267-2-3, EN50399
	Vertical flame propagation	EN 60332-1-2	1 kW individual cable test	Test length ≤ 0.425 m		
E_{ca}	Vertical flame propagation	EN 60332-1-2	1 kW individual cable test	Test length ≤ 0.425 m		
F_{ca}				No requirement		

This classification is applicable for cables as building products according to EN 13501-6.

EN 50575 requires that the CE conformity of the building product be certified for the building product in accordance with its classification and that this certificate be attached to the marketed product to ensure complete traceability.

EN 50575 does not define which class must be used in which building and in which section of the building (for example in escape routes). This is defined in the building regulations of the individual federal provinces. It has at present not yet been implemented in Germany. Other countries such as the Netherlands have already elaborated the relevant specifications and recorded them in NEN 8012. As a result, there can be different class requirements for a cable product in the EU depending on the country in which it is used.

As the specification has not yet been included in the regional building regulations, the German cable industry has issued a recommendation which can be found in the relevant White Paper of the Central Association of the Electrical and Electronics Industry (ZVEI). This recommendation is also cited in the relevant standards as a directive for electrical installations according to DIN VDE 0100, but these recommendations are not legally binding.

Find out more

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