

Fire safety with state-of-the-art products PureLink installation cables and conduits.

From 01 July 2017, the full scale of regulations of the new EU safety standard EN50575 for building products is in force. Accordingly, manufacturers and distributors can only bring out and sell products which fully comply with the new standard.

The new CPR (Construction Products Regulation) introduces a new EU-wide standard for fire classification of construction products, and determines new, uniform test methods for products subject to this legal norm.

Which changes come with the new legislation?

The fire classes each EU country determined individually are replaced by seven new Euro fire classes. The newly adopted, standardised test methods were stipulated for establishing EU-wide identical safety and environmental standards. Both, re-sellers and end customers will benefit from the so-established comparability of products in the European market. Each product is tested by independent institutions. The product properties are described in a formal Declaration of Performance (DOP). Together, DoP and CE-marking prove the product's conformity with the valid European regulations.

Why are cables affected by this regulation?

CPR defines construction products as all products which are typically intended or used for permanent installation into buildings. Thus, power, communication, data, or control cables, e.g. laid into concrete, or under plaster, are affected.

Exceptions:

- Types of cables which are not used for permanent installation in buildings
- Cables with at least one plug for connecting devices
- Internal cable connections of electronic systems or electric appliances
- Functional endurance cables (E30, E90) unless a special EU Regulation is being issued

How find the applicable cable class?

Fire protection regulations are in the legislation power of the individual EU member states. Accordingly, the fire protection requirements and building classes may differ considerably from country to country.

The recommendations of the German Electrical and Electronic Manufacturers' Association overleaf may serve for instruction.

Building Classes according to German MBO (model building regulation)				Euro Classes
Class	Description			Minimum Requirements for Buildings (except Escape Paths)
1	Detached buildings and detached buildings for agricultural or forestry use	Height up to 7 m	Altogether max. 400 m ²	E _{CA}
2	Buildings	Height up to 7 m	Altogether max. 400 m ²	E _{CA}
3	Other buildings	Height up to 7 m		E _{CA}
4	Other buildings	Height up to 13 m	Each unit max. 400 m ²	E _{CA}
5	Other buildings, including subterranean buildings			C _{CA} s1 d2 a1

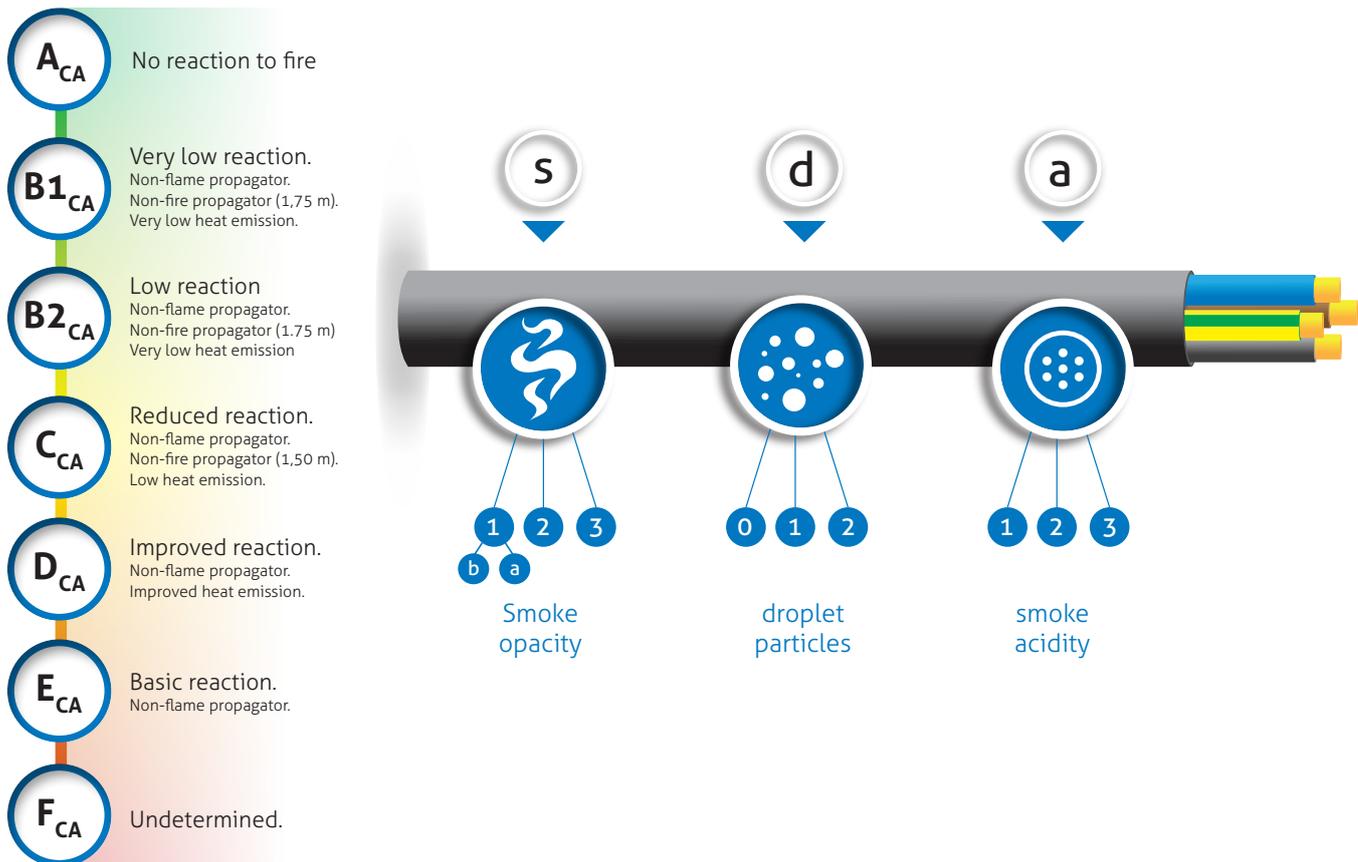
Special Constructions				Euro Classes
S1	High-rise building	Higher than 22 m		C _{CA} s1 d2 a1
S2	Building works	Higher than 30 m		C _{CA} s1 d2 a1
S3	Buildings	Largest floor larger than 1.600 m ² , except residential buildings and garages		C _{CA} s1 d2 a1
S4	Shops	Larger than 800 m ²		C _{CA} s1 d2 a1
S5	Offices	Rooms larger than 400 m ²		C _{CA} s1 d2 a1
S6	Buildings with rooms	Single rooms use for more than 100 persons		C _{CA} s1 d2 a1
S7	Meeting places	More than 200 persons		C _{CA} s1 d2 a1
S8	Restaurants /Hotels	More than 40 guest places in buildings, more than 12 beds, gambling halls more than 150 m ²		C _{CA} s1 d2 a1
S9	Buildings with utilization units for care or persons requiring care	More than 6 persons, intensive care requirements		B2 _{CA} s1 d1 a1
S10	Hospitals			B2 _{CA} s1 d1 a1
S11	Other facilities for accommodation of persons, residential homes			C _{CA} s1 d2 a1
S12	Day centres for children, disabled or old people			B2 _{CA} s1 d1 a1
S13	Schools, universities, similar facilities			C _{CA} s1 d2 a1
S14	Prisons, facilities for forensic commitment			C _{CA} s1 d2 a1
S16	Recreational parks			C _{CA} s1 d2 a1
S18	High-bay racking buildings with loading top edge higher than 7,5m			E _{CA}
S19	Facilities for storage of materials with increased danger of fire			B2 _{CA} s1 d1 a1

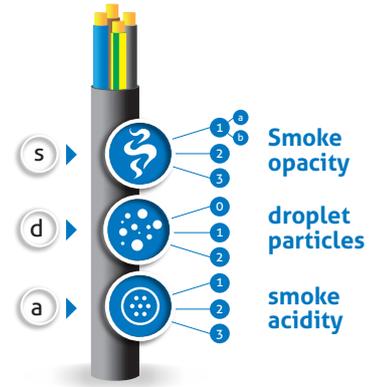
Originator: ZVEI (Zentralverband Elektrotechnik- und Elektronikindustrie e.V.)
For escape paths, general use of cable class B2_{CA} s1 d1 a1 is recommended.

Which criteria and requirements are regulated by CPR?

The CPR classification corresponds with the reaction to fire of cables. The new test standards determine

- Energy content
- Propagation of flames
- Properties of heat and smoke emission, acidity performance
- Velocity of fire development
- Burning droplet and particles





Class	Description	Additional Classification für B1 _{CA'} B2 _{CA'} C _{CA'} D _{CA'}			German building inspectorate classification (MBO)	Use	
Flame propagator and heat emission	Cables	SMOKE production/ transmittance (s1 - s3) (s1a - s1b)	DROPLET burning droplets and particles (d0 - d2)	ACIDITY acid propagation/ corrosivity (a1 - a3)	Flame- / heat propagation	Safety requirements	
	EN ISO 1716 EN50399 EN560332 1 2 Calorific value Heat emission / Fire growth rate Non-flame propagation	EN50399 / EN61034	EN50399	EN60754-2			
CONTRIBUTION TO FIRE PROPAGATION 	A _{CA}	Incombustible products, e.g. with ceramic insulation. Not applicable for plastic-insulated cables			Incombustible : No contribution to fire	Very high	
	B1 _{CA}	Highest class of flammable cables			Flame-resistant : Minimal contribution to fire		
	B2 _{CA}	Products which may contribute to flame propagation	s1 a/b	d1	a1	Normally combustible: Contribution to fire	
	C _{CA}	Products which may contribute to flame propagation	s2	d2	a1		High
	D _{CA}	Products with flammability similar to wood	s2	d2	a1		Medium
	E _{CA}	Products with flame-retardant properties for the case of smaller fires, and for which no defined heat- and smoke propagation properties were determined	s3			Low	
	F _{CA}	Products which do not comply to class ECA, e.g. for which no provisions for fire behaviour were determined. "No class determined".	s3			Easily combustible: Properties not defined	No

Is further use of PVC or halogene containing cables still allowed?

Yes. The new EU standard increases product safety by defining uniform product properties and test methods. The new EN50575 does not determine cable materials.

How is it guaranteed that cables comply with the new standards?

A Declaration of Performance (DoP) and a CE Marking is required for each product. The manufacturer is liable for correct, complete information and conformity with all regulations.

Which obligations result from the new regulations for re-sellers?

According to law, this document accompanies the distribution chain from the manufacturer to the end customer.



The manufacturer describes the cable product and intended use in the **Declaration of Performance (DoP)**, including the main product properties and performance values. This information enables the user to decide if this cable is suitable for his purpose. Each DoP is identified by a reference number. As a legal document, it has to be publicly available. The manufacturer is obliged to keep DoP and technical documentation for a period of ten years.

The Declarations of Performance for each product are available for download on www.purelink.de. Upon request, we will provide additional hard copies.

Subsequent to the manufacturer, the reseller is responsible for making DoP documents available to his customers, including provision of sufficient copies, and assignment to the sales product.

The **CE-Marking** has to be attached to each product packaging going on sale in an easily visible, legible and indelible way. The CRP stipulates further information to be given besides the CE symbol.

The cable itself needs no labelling. The reseller thus has to make sure that he attaches the CE-Marking anew when customising or repacking products.

Any further queries?

We are there for you. Please contact us for more information about EN 50757 and suitable PureLink products.

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