

Fire rated cables for installations in buildings

According to the European Construction Products Regulation (CPR)



Did you know?

Since 1st of July 2017, all cables that are permanently installed in buildings are subject to the European **Construction Products Regulation (CPR)**.

In order to increase fire safety in buildings and to minimize consequential damage caused by fires, the EU has defined uniform regulations for the use of construction products inside buildings. Cables as construction products are assigned to specific fire **performance classes (Euroclasses)** based on their **reaction to fire**. The corresponding **harmonized standard hEN 50575** defines the rules for the classification, evaluation and certification of construction products for all EU countries.

The classification is based on flame spread and heat release, additional criteria include **smoke emission, acidity of gases and flaming droplets**. These criteria determine the fire performance class of the cables and thus their installation location in a building. In order to achieve more safety in the event of a fire, the Euroclass of the cables installed must correspond to the **fire safety requirements in a building**.



- Buildings with **very high fire safety requirements** (hospitals, day-care facilities for children etc.)
 - > Cables of the **Euroclass B2ca**
- Buildings with **high fire safety requirements** (office and tower buildings, hotels, large stores etc.)
 - > Cables of the **Euroclass Cca**

Fire rated coaxial cables from SSB-Electronic

SSB-Electronic Germany offers coaxial **cables of the Euroclasses Cca to Fca** for every application. Individual assembly with connectors of all common standards is possible upon request.

Fire rated coaxial cables for different fire protection requirements

The following overview shows the fire ratings of our coaxial cables and their recommended application areas according to the fire safety requirements in a building.

Coaxial Cable	Euroclass according to EN 50575	Building Fire Safety Requirements	Application Area	Classification Criteria	AVCP System (Assessment and Verification of Constancy of Performance)
Aircell 5 Aircell 7 Ecoflex 10 Ecoflex 10 PLUS Ecoflex 15 Ecoflex 15 PLUS Aircom Premium Ecoflex Multicore	Eca	low	Cables for standard applications: in buildings with low height or low volume of occupants, in apartments	Flame propagation EN 60332-1-2 $H \leq 425 \text{ mm}$	System 3: Initial type-testing by third-party notified testing laboratory Factory production control (FCB) by manufacturer
Ecoflex 10 PLUS Heatex	Cca s1 d0 a1	high	Cables for areas with increased fire risk: in tower buildings, facilities, administration & office buildings, commercial buildings, restaurants, hotels, underground parking, schools, prisons, leisure facilities, etc.	Flame propagation EN 60332-1-2 $H \leq 425 \text{ mm}$ Heat release, vertical flame spread EN 50399 $FS \leq 2,0 \text{ m}$ $THR \leq 30 \text{ MJ}$ $\text{max. HRR} \leq 60 \text{ kW}$ $FIGRA \leq 300 \text{ W/s}$ $\text{Flammenquelle} = 20,5 \text{ kW}$	System 1+: Initial type-testing by third-party notified product certification body Continuous factory inspection by third-party notified product certification body Continuous audit testing of samples by third-party notified product certification body Factory production control (FCB) by manufacturer
Ecoflex 15 PLUS Heatex	Cca s2 d2 a1			Smoke production EN 50399/EN 61034-2 s1, s1a, s1b, s2, s3 Acidity/Corrosivity EN 60754-2 a1, a2, a3 Flaming droplets EN 50399 d0, d1, d2	
Aircell 5 Heatex Aircell 7 Heatex	Cca s1 d0 a1				

Explanations:

Opacity of the emitted smoke / smoke

s1: Low smoke production and slow smoke propagation

$TSP \leq 50 \text{ m}^2$, max. $SPR \leq 0,25 \text{ m}^2/\text{s}$

s1a: Transmittance $\geq 80 \%$

s1b: Transmittance $\geq 60 \%$ < 80%

s2: Average smoke production and propagation

$TSP \leq 400 \text{ m}^2$, max. $SPR \leq 1,5 \text{ m}^2/\text{s}$

s3: none of the above

Dripping of burning material during the fire / droplets

d0: No burning droplets or particles

d1: No burning droplets or particles that last more than 10 sec.

d2: none of the above

Emission of acid gases during the fire / acidity

a1: Low acidity of gases, conductivity < $2,5 \mu\text{S}/\text{mm}$ and $\text{pH} > 4,3$

a2: Average acidity of gases, conductivity < $10 \mu\text{S}/\text{mm}$ and $\text{pH} > 4,3$

a3: none of the above

Abbreviations:

H: Vertical Flame Spread (mm)

FS: Vertical Flame Spread (m)

THR: Total Heat Release

HRR: Max. Heat Release Rate

FIGRA: Fire Growth Rate

TSP: Total Smoke Production

SPR: Max. Smoke Production Rate (m^2/s)

Further information on the EU Construction Products Regulation and the declarations of performance (DoP) for our coaxial cables can be found on our website:

www.ssb-electronic.com

SSB-Electronic GmbH

Am Pulverhäuschen 4 · 59557 Lippstadt/Germany · Phone: +49 2941-93385-0 · sales@ssb-electronic.com · www.ssb-electronic.com

