

Migulez

CABLES

Construction Product Regulation REGULATION (UE) n° 305/2011 - CPR

CPR CLASSIFICATION FOR REACTION TO FIRE

CLASSIFICATION CRITERIA

ADDITIONAL CLASSIFICATION

A_{ca} No reaction to fire

B1_{ca} Minimum reaction to fire
Minimum contribution to fire.
Minimum heat emission & fire growth rate.
Fire retardant (1,75 m).
Flame retardant.

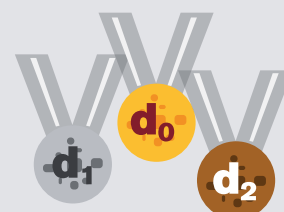
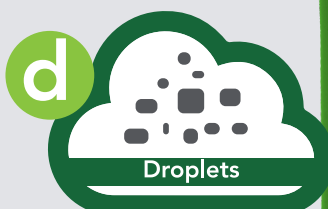
B2_{ca} Very low reaction to fire
Very low contribution to fire.
Very low heat emission & fire growth rate.
Fire retardant (1,5 m).
Flame retardant.

C_{ca} Low reaction to fire
Limited contribution to fire.
Reduced heat emission & fire growth rate.
Fire retardant (2 m).
Flame retardant.

D_{ca} Moderate reaction to fire
Acceptable contribution to fire.
Moderate heat emission & fire growth rate.
Flame retardant.

E_{ca} Basic reaction to fire
Significant contribution to fire.
Flame retardant.

F_{ca} No performance determined



Example: AFIRENAS-X RZ1-K(AS) 0,6/1 kV.
Its declared reaction to fire characteristic is **B2ca-s1b, d1, a1**.
It is a cable with a very low contribution to fire

- **B2ca:**
 - o Very low heat emission and fire growth rate (EN 50399)
 - o Fire retardant (EN 50399)
 - o Flame retardant (EN 60332-1-2)
- **s1b:**
 - o Very low smoke production (EN 50399)
 - o Low opacity and density of smoke (EN 61034-2)
- **d1:**
 - o Low production of flaming droplets and/or particles (EN 50399)
- **a1:**
 - o Very low acidity and conductivity of the emitted gases (EN 60754-2)

1 What is CPR?

CPR Regulation lays down conditions for the placing or making available on the market of construction products by establishing harmonised rules on how to express the performance of construction products in relation to their essential characteristics and on the use of CE marking on those products.



2 Objectives

- 1 Develop a common & unified language in EU
- 2 Ensuring the quality of construction products
- 3 Clearer, more reliable & transparent information of construction products
- 4 Increase safety of the installations

BASICS REQUIREMENTS

ESSENTIAL CHARACTERISTICS

PERFORMANCES (Levels or classes)

3 For whom is CPR applicable?



Regulatory authorities of the Member states, Contractors, Manufacturers, Importers, Distributors, Engineers, Installers, End Users.

4 How does CPR affect cables?

Power, control, communication and fiber optic cables

Requirements	Characteristics	Standard
- Safety in case of fire	Resistance to fire Reaction to fire	EN 50575:2014 + A1:2016
- Hygiene, health & environment	Dangerous substances	

Construction Product: Any product or kit which is produced and placed on the market for incorporation in a permanent manner in construction works or parts thereof and the performance of which has an effect on the performance of the construction works with respect to the basic requirements for construction Works.

5 Deadlines

Entry into force of Regulation CPR (UE) n° 305/2011

2013
JULY 1st

Applicable to electrical cables:

2016
JUNE 10th

2016
JULY 1st
2017
JUNE 30th

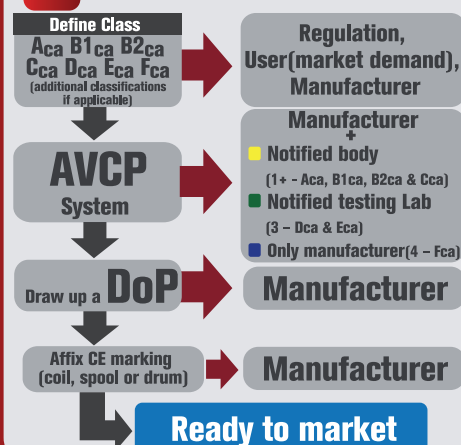
2017
JULY 1st

Entry into force

Transitional period

Full force

6 Application scheme



7

Class	Test methods and classification criteria	Additional classification	AVPC System
Aca	Calorific value EN ISO 1716	---	1+ Aca B1ca B2ca & Cca
B1ca	Heat release and fire grow rate (THR1200s, Peak HRR y FIGRA) EN 50399	Smoke production (s1, s2, s3) EN 50399	*Manufacturer: Factory production control (FPC) Further testing of samples taken at the factory according to a prescribed test plan
B2ca	B1ca: Flame 30 kW B2ca, Cca y Dca: Flame 20,5 kW	Smoke density (s1a, s1b) EN 61034-2	*Notified body: Initial type testing, initial inspection of the manufacturing plant and of FPC, continuous surveillance, assessment and evaluation of FPC, audit testing of samples taken before placing the product on the market
Cca	Fire retardant EN 50399 FS ≤ 1,75m (B1ca); FS ≤ 1,5m (B2ca); FS ≤ 2m (Cca); N/A (Dca);	Flaming droplets &/or particles (d0, d1, d2) EN 50399	3 Dca & Eca
Dca	Flame retardant EN 60332-1-2 Hs425mm	Acidity and conductivity of gases (a1, a2, a3) EN 60754-2	*Manufacturer: Factory production control (FPC)
Eca	Flame retardant EN 60332-1-2 Hs425mm	---	*Notified testing Laboratory: Initial type testing
Fca	Flame retardant EN 60332-1-2 Hs425mm	---	4 Fca
			*Manufacturer: Factory production control (FPC) & Initial type testing

8 Declaration of performance (DoP)

DECLARATION OF PERFORMANCE

- DoP Number
- Unique identification code of the product-type
- Intended use/es
- Registered trade name and contact address of manufacturer
- AVCP System(s)
- Notified body number
- Declared performances and harmonised standard

Miguelélez signature, name & function

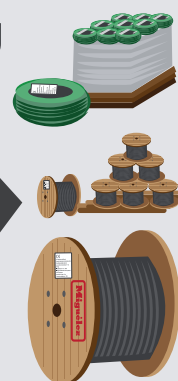
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9 CE Marking

CE

- Identification Nbr. of the Notified body
- Registered trade name and contact address of manufacturer
- Two last digits of the year in which CE marking was first affixed
- DoP Number
- Harmonised standard
- Unique identification code of the product-type
- Intended use/es
- Declared performances



10 Evolution of Migulelez cable types (CPR)

Safety in case of fire	Minimum CPR classification	Technical designation
High security cables (AS) (AS+) (Halogen free, low smoke, fire retardant)	Cca s1, d1, a1	H07Z1-U, H07Z1-R H07Z1-K, H07Z-R ES07Z-K, RZ1 (AS) RZ1-K(AS+), SZ1-K(AS+) RZ1-K(AS+) mica
Conventional cables (Flame retardant)	Eca	H07V-U, H07V-R H07V-K, H05VV-F U-1000 R2V, RV-K RVFV/RVVF, RVMV