



B2_{ca}

APPLICATION

Toxfree® ZH Z1Z1-K (AS) is a LSHF safety cable. In the event of fire, it does not emit toxic gases, nor does it give off corrosive gases, avoiding any possible damage to people or electronic equipment. For these reasons it is highly recommended for use in public places such as: hospitals, schools, museums, airports, bus terminals, shopping malls, offices, laboratories, etc.

- Industrial use.
- Public places.

CONSTRUCTION

Conductor

Electrolytic annealed copper conductor, class 5 (flexible) according to EN 60228 and IEC 60228.

Insulation

Special low smoke and halogen free polyolefin insulation.

The standard identification of insulated conductors according to HD 308 is the following:

6 G or more Black numbered + Green/Yellow

Outer sheath

Low Smoke Halogen Free (LSHF) polyolefin outer sheath. Green colour, non-toxic and fire retardant. Other outer sheath colours available on request.

CHARACTERISTICS

⚡ Electrical performance

Low voltage: 0,6/1 kV.

🌡 Thermal performance

Maximum service temperature: 70°C.

Maximum short-circuit temperature: 160°C (max. 5 s).

Minimum service temperature: -40°C (static, with protection).

🔥 Fire performance

Flame non-propagation according to EN 60332-1 / IEC 60332-1.

Fire non-propagation according to EN 60332-3 / IEC 60332-3 and EN 50399.

Reaction to fire CPR: B2_{ca}-s1a,d1,a1 according to EN 50575.

LSHF (Low Smoke Halogen Free) according to EN 60754-1 / IEC 60754-1.

Low smoke emission according to EN 61034 / IEC 61034:

Light transmittance > 80%.

Low corrosive gases emission according to EN 60754-2 / IEC 60754-2.

📏 Mechanical performance

Minimum bending radius: 5x cable diameter.

Impact resistance: AG2 Medium severity.

🌐 Environmental performance

Chemical & Oil resistance: Acceptable.

UV Resistant: UNE 211605 and EN 50618.

Water resistance: AD5 Jets.

🔧 Installation conditions

Open Air.

Buried.

In conduit.

STANDARDS / COMPLIANCE



Based to:

IEC 60502-1 / UNE 21123-4



Standards and approvals

RoHS / CE

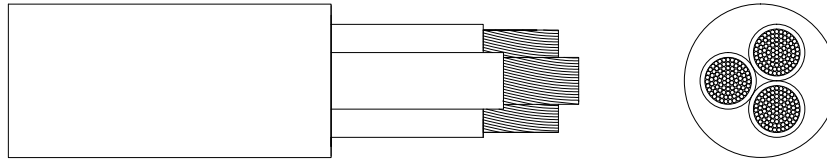


CPR (Construction Products Regulation)

B2_{ca}-s1a,d1,a1



DIMENSIONS & ADMISSIBLE INTENSITIES



Cross-section (mm ²)	Diameter (mm)	Weight (kg/km)	Open air (A) ¹	Buried in duct (A) ²	Voltage drop (V/A · km) ³
7 G 1,5	11,2	220	22	22	31,8
7 G 2,5	12,7	305	30	29	19,1
8 G 1,5	12,3	250	22	22	31,8
8 G 2,5	13,8	345	30	29	19,1
10 G 1,5	13,2	295	22	22	31,8
10 G 2,5	14,7	415	30	29	19,1
12 G 1,5	13,9	335	22	22	31,8
19 G 1,5	16,7	500	22	22	31,8
24 G 1,5	18,8	615	22	22	31,8

¹ Reference method E for multicore cables according to IEC 60364-5-52 in open air at 30°C ambient temperature.

² Reference method D1 according to IEC 60364-5-52. Buried in duct at 0,7 m depth with soil thermal resistivity of 2,5 K·m/W and 20°C of ground temperature.

³ At maximum service temperature and $\cos\varphi=1$.

For 6 or more conductors, it is supposed a single-phase circuit. For the rest of the cables it is supposed a three-phase circuit.