



## B2<sub>ca</sub>

## APPLICATION

Toxfree® ZH RZ1 (AS) AI is an aluminium LSHF cable for fixed installations. These cables are specially recommended for installation in public places and in installations where safety is a priority.

## CONSTRUCTION

### Conductor

Aluminium conductor, class 2, according to EN 60228 and IEC 60228.

### Insulation

Cross-linked polyethylene (XLPE) insulation according to IEC 60502-1 and type DIX-3 according to HD 603.

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

- 1 x Natural
- 3 x Brown + Black + Grey
- 4 x Brown + Black + Grey + Blue

### Outer sheath

Low Smoke Halogen Free (LSHF) polyolefin outer sheath. Green colour. Other outer sheath colours available on request.

## CHARACTERISTICS

### ⚡ Electrical performance

Low voltage: 0,6/1 kV

### 🌡 Thermal performance

Maximum service temperature: 90°C.

Maximum short-circuit temperature: 250°C (max. 5 s).

Minimum service temperature: -40°C (fixed and protected installations)

Minimum installation and handling temperature: -0°C.

### 🔥 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<sub>ca</sub>-s1a, d1, a1 (for single core cables) and B2<sub>ca</sub>-s1b, d1, a1 (for multicore cables), according to EN 50575.

LSHF (Low Smoke Halogen Free) according to EN 60754-1 / IEC60754-1.

Low smoke emission according to EN 61034 / IEC 61034:

Light transmittance > 60%.

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 according to UNE 211605 and EN 50618.

Water resistance: AD5 Jets.

## STANDARDS / COMPLIANCE



### According to

IEC 60502-1 / UNE 21123-4.



### Standards and approvals

RoHS / CE.



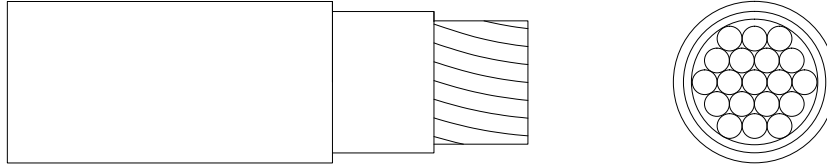
### CPR (Construction Products Regulation)

B2<sub>ca</sub>-s1a, d1, a1 (single core cables).

B2<sub>ca</sub>-s1b, d1, a1 (multicore cables).



## DIMENSIONS & ADMISSIBLE INTENSITIES



Cross-section (mm <sup>2</sup> )	Diameter (mm)	Weight (kg/km)	Open air (A) <sup>1</sup>	Buried (A) <sup>2</sup>	Voltage drop (V/A · km) <sup>3</sup>
1 x 25	10,9	150	121	98	3,075
1 x 35	12	200	150	117	2,225
1 x 50	13,3	245	184	139	1,643
1 x 70	15,4	325	237	170	1,135
1 x 95	16,7	415	289	204	0,820
1 x 120	18,1	485	337	233	0,648
1 x 150	20,3	625	389	261	0,528
1 x 185	22,4	725	447	296	0,420
1 x 240	25,2	970	530	343	0,320
1 x 300	28,2	1.170	613	386	0,256
1 x 400	31,2	1.455	740	444	0,199
3 x 120	37,7	2.080	300	233	0,648
4 x 150	46,8	2.985	346	261	0,528
4 x 185	52,5	3.840	397	296	0,420
4 x 240	58,2	4.890	470	343	0,320
4 x 300	66,3	6.045	543	386	0,256

<sup>1</sup> Reference method F for single-core and method E for multicore cables according to IEC 60364-5-52 in open air at 30°C ambient temperature.

<sup>2</sup> Reference method D2 according to IEC 60364-5-52. Directly buried at 0,7 m depth with soil thermal resistivity of 2,5 K-m/W and 20°C of ground temperature.

<sup>3</sup> At maximum service temperature and  $\cos\phi=1$ .

For all cables, a single-phase circuit is supposed.