

TOXFREE® ZH OUTDOOR H07Z1-K (AS) type 2 CuSn

grounding cable, with tinned copper conductor.

ACCORDING TO: EN 50525-3-31 / UNE 211002



B2_{ca}

APPLICATION

Toxfree® ZH Outdoor H07Z1-K (AS) CuSn is a cable specially designed for ground connections in outdoor installations. The tinned copper conductor and special outer sheath compounds make this cable highly resistant to corrosion and ultraviolet (UV) degradation and prevent galvanic pair when connecting metals of different normal potential.

It is a halogen-free cable with the highest CPR classification (B2_{ca}-s1a,d1,a1) and UV protection according to solar standard EN 50618.

CONSTRUCTION

Conductor

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

Insulation

UV resistant polyolefin, type T17 according to EN 50363-7.

The standard identification of insulated conductors is the following:

Green/Yellow RAL 6018/1021

Other colours available on request.

CHARACTERISTICS



Electrical performance

Low voltage: 450/750 V.



Thermal performance

Maximum conductor temperature: 70°C.

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

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



Fire performance

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

Fire non-propagation according to EN 60332-3-24 / IEC 60332-3-24 and EN 50399.

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

Low smoke halogen free according to EN 60754-1 / IEC 60754-1.

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

Low smoke emission according to EN 61034 / IEC 61034:

Light transmittance > 80%.



Mechanical performance

Minimum bending radius: 5x cable diameter.



Environmental performance

Chemical & Oil resistance: Excellent.

Grease & mineral oils resistance: Excellent.

UV Resistant according to EN 50618.

Ozone resistant according to EN 50618.

STANDARDS / COMPLIANCE



According to

EN 50525-3-31 / UNE 211002



Standards and approvals

HAR / AENOR / BUREAU VERITAS / RoHS / CE



CPR (Construction Products Regulation)

B2_{ca}-s1a, d1, a1



DIMENSIONS & ADMISSIBLE INTENSITIES



Cross-section (mm ²)	Diameter (mm)	Weight (kg/km)	In conduit 2 cond. (A) ¹	In conduit 3 cond. (A) ¹	Voltage drop (V/A · km) ²
1 x 4	4,1	45	32	28	12,2
1 x 6	4,7	65	41	36	8,11
1 x 10	6,0	105	57	50	4,66
1 x 16	7,0	160	76	68	2,97
1 x 25	8,8	250	101	89	1,90
1 x 35	9,9	335	125	110	1,35
1 x 50	11,7	480	151	134	0,940
1 x 70	13,2	660	192	171	0,662
1 x 95	15,6	870	232	207	0,502
1 x 120	17,0	1.100	269	239	0,392
1 x 150	18,9	1.380	300	262	0,315
1 x 185	21,5	1.680	341	296	0,258
1 x 240	24,5	2.205	400	346	0,195

¹ Reference method B1 for two and three loaded conductors installed in conduit on a wall according to IEC60364-5-52 in open air at 30°C ambient temperature.

² At 70°C conductor temperature, cos φ= 1 and single-phase circuit.

SHORT-CIRCUIT CURRENT-CARRYING CAPACITIES

Time (s)	0,1	0,2	0,3	0,5	1	1,5	2	2,5	3
A/mm ²	364	257	210	163	115	94	81	73	66

CORRECTION FACTORS FOR AIR TEMPERATURE

Air T. (°C)	20	25	30	35	40	45	50	55	60
Factor	1,12	1,06	1	0,94	0,87	0,79	0,71	0,61	0,50