



TOXFREE ZH YMz1Kf

**Flexible and halogen free (LSZH)
power cable for public places.**

IEC 60502-1 / UNE 21123-4 /
based on HD604 S1: 1994/A3 5C - revision 2016



DESIGN

Conductor

Electrolytic copper, class 5 (flexible), based on EN 60228 and IEC 60228.

B_{ca} -s1a, d1, a1

Insulation

Cross-linked flame non propagation polyethylene (XLPE)

The standard identification of insulated conductors is the following:

1 x	Natural
2 x	Blue + Brown
3 G	Blue + Brown + Yellow/green
3 x	Brown + Black + Grey
3 x + 1 x	Brown + Black + Grey + Blue (reduced cross-section)
4 G	Brown + Black + Grey + Green/yellow
4 x	Brown + Black + Grey + Blue
5 G	Brown + Black + Grey + Blue + Green/yellow
6 G or more conductors:	Black numbered + Green/yellow (*)

(*) ZIZI-K (AS) cable with special low smoke and halogen free polyolefine insulation.

Outer sheath

Low Smoke Zero Halogen (LSZH) polyolefin. Green colour (*), non-toxic and fire retardant.

(*) Other outer sheath colours available on request.

APPLICATIONS

Toxfree ZH YMz1Kf is a LSZH 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.



TOP CABLE TOXFREE ZH YMz1Kf



CHARACTERISTICS



Electrical performance

LOW VOLTAGE 0,6/1kV



Standard

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Approvals

CE
AENOR
SASO
SEC
RoHS

KEMA/KEUR



B2_{ca}-s1a, d1, a1



Followed norms / Test standards

HD 308 : Identification of cores.
HD 605 : Electric Cables additional test methods.
NEN 8012 : Selection of fire classification.
EN 13501-6 : Fire classification of construction products part 6.
EN 50395 : Electrical test methods for low voltage energy cables.
EN 50396 : Non electrical test methods for low voltage energy cables.
EN 50399 : Common test methods for cable under fire conditions.
CLC/TS 50576 : Electric cables Extended application of test results.
EN 60228 : Conductors of Insulated cables.
EN 60332-1-2 : Test on cables under fire conditions.
EN 60754-2 : Test on combustion of gases during fire.
EN 60811 : Insulating and sheathing materials.
EN 62230 : Electric cables - Spark test method.



Thermal performance

Maximum service temperature: 90°C. (70°C *)
Maximum short-circuit temperature: 250°C (max. 5 s).
Minimum service temperature: -40°C (fixed and protected installations).



Mechanical performance

Minimum bending radius: x5 cable diameter.
Impact resistance: AG2 Medium severity.
Conformity HD604 S1: 1994/A3 5C - revision 2016:
Table 2^a ref. 3: Mechanical properties of insulation.
Table 2^a ref. 4: Mechanical properties of inner sheath.
Table 2^a ref. 5: Mechanical and physical properties of sheath including the contamination test.
Table 2^a ref. 6: Bend test on complete cable.
Table 2^a ref. 7: Abrasion test on complete cable.



Chemical performance

Chemical & Oil resistance: Acceptable.
UV Resistant: UNE 211605.



Water performance

Water resistance: AD5 Jets.



Fire performance

Flame non propagation based on EN 60332-1 and IEC 60332-1.
No fire propagation based on EN 60332-3, IEC 60332-3 and EN 50399.
LSZH (Low Smoke Zero Halogen) based on EN 60754 and IEC 60754.
Low smoke emission based on EN 61034 and IEC 61034:
Light transmittance > 60%
Low corrosive gases emission based on EN 60754-2 and IEC 60754-2.
Reaction to fire CPR: B2_{ca}-s1a,d1,a1, according to EN 50575.



Other

Meter by meter marking.



Installation conditions

Open Air. Buried. In conduit.



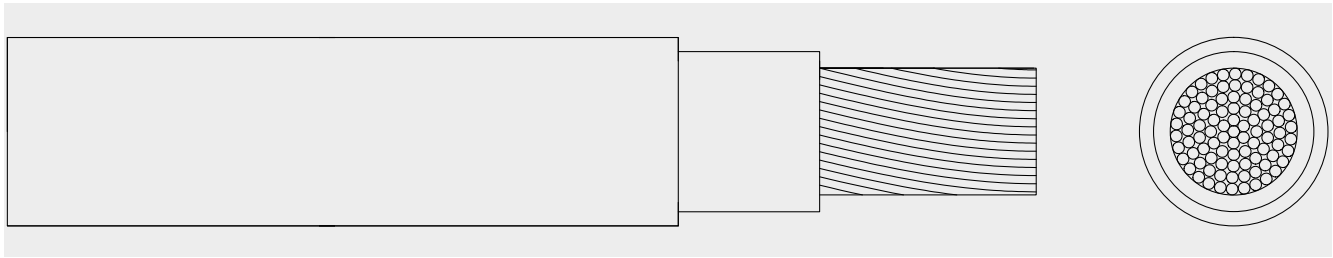
Applications

Industrial use. Public places.



Packaging

Available in coils (lengths of 50 and 100 m) and drums.



DIMENSIONS

Cross section (mm ²)	Diameter (mm ²)	Weight (Kg/km)	Open Air 30°C (A)	Buried 20°C (A)	Voltage drop (V/A · km)
1 x 2,5	6,1	57	29	29	17,7
1 x 4	6,7	73	40	37	11
1 x 6	7,1	93	53	46	7,32
1 x 10	8,1	136	74	61	4,23
1 x 16	9,1	192	101	79	2,68
1 x 25	11	288	135	101	1,73
1 x 35	12,1	380	169	122	1,23
1 x 50	13,8	520	207	144	0,86
1 x 70	15,9	716	268	178	0,603
1 x 95	17,6	924	328	211	0,457
1 x 120	19,4	1.167	383	240	0,357
1 x 150	21,5	1.456	444	271	0,286
1 x 185	24,1	1.762	510	304	0,235
1 x 240	26,9	2.283	607	351	0,178
1 x 300	29,6	2.851	703	396	0,142
1 x 400	33,8	3.735	823	464	0,108
1 x 500	38	4.845	946	525	0,085
1 x 630	43,1	6.311	1.088	596	0,064
2 x 1,5	8,3	97	26	26	34
2 x 2,5	9,2	127	36	34	20,4
2 x 4	10,2	168	49	44	12,7
2 x 6	11,1	217	63	56	8,45
2 x 10	13	323	86	73	4,89
2 x 16	15,8	490	115	95	3,1
3 G 1,5	9	116	26	26	34
3 G 2,5	9,8	151	36	34	20,4
3 G 4	11	206	49	44	12,7
3 G 6	11,9	269	63	56	8,45
3 G 10	14,1	412	86	73	4,89
3 x 16	16,9	624	100	79	2,68
3 x 25	20,6	953	127	101	1,73
3 x 35	23,4	1.276	158	122	1,23
3 x 50	26,8	1.752	192	144	0,86
3 x 70	31,5	2.436	246	178	0,603
3 x 95	35,5	3.230	298	211	0,457
3 x 120	39,8	4.110	346	240	0,357
3 x 16 + 1 x 10	18	724	100	79	2,68
3 x 25 + 1 x 16	21,8	1.097	127	101	1,73
3 x 35 + 1 x 16	24,1	1.405	158	122	1,23
3 x 50 + 1 x 25	28,1	1.970	192	144	0,86
3 x 70 + 1 x 35	32,6	2.722	246	178	0,603
3 x 95 + 1 x 50	37	3.597	298	211	0,457
3 x 120 + 1 x 70	41,5	4.609	346	240	0,357
3 x 150 + 1 x 70	44,9	5.579	399	271	0,286
3 x 185 + 1 x 95	51,5	6.926	456	304	0,235

Cross section (mm ²)	Diameter (mm ²)	Weight (Kg/km)	Open Air 30°C (A)	Buried 20°C (A)	Voltage drop (V/A · km)
3 x 240 + 1 x 120	58,8	9.030	538	351	0,178
4 G 1,5	9,7	136	23	22	29,5
4 G 2,5	10,8	184	32	29	17,7
4 G 4	12	252	42	37	11
4 G 6	13,2	334	54	46	7,32
4 G 10	15,4	513	75	61	4,23
4 x 16	18,7	783	100	79	2,68
4 x 25	23,1	1.204	127	101	1,73
4 x 35	25,5	1.616	158	122	1,23
4 x 50	30,3	2.242	192	144	0,86
4 x 70	35,3	3.119	246	178	0,603
4 x 95	39,4	4.035	298	211	0,457
4 x 120	43,6	5.104	346	240	0,357
4 x 150	49,8	6.569	399	271	0,286
4 x 185	56,5	8.063	456	304	0,235
4 x 240	63,1	10.421	538	351	0,178
5 G 1,5	10,3	159	23	22	29,5
5 G 2,5	11,6	217	32	29	17,7
5 G 4	13	302	42	37	11
5 G 6	14,4	404	54	46	7,32
5 G 10	16,9	627	75	61	4,23
5 G 16	20,4	956	100	79	2,68
5 G 25	25,1	1.469	127	101	1,73
5 G 35	28,1	1.968	158	122	1,23
5 G 50	33,7	2.779	192	144	0,86
5 G 70	39,3	4.046	246	178	0,603
5 G 95	45	5.271	298	211	0,457
7 G 1,5	11,3	200	26	26	33,9
7 G 2,5	12,8	280	36	34	20,4
8 G 1,5	12,4	225	26	26	33,9
8 G 2,5	13,9	315	36	34	20,4
10 G 1,5	13,4	265	26	26	33,9
10 G 2,5	14,9	375	36	34	20,4
12 G 1,5	14,1	305	26	26	33,9
12 G 2,5	17,2	460	36	34	20,4
14 G 1,5	15,8	360	26	26	33,9
14 G 2,5	17,8	505	36	34	20,4
16 G 1,5	16,3	400	26	26	33,9
16 G 2,5	18,5	570	36	34	20,4
19 G 1,5	17	450	26	26	33,9
19 G 2,5	19,5	650	36	34	20,4
24 G 1,5	19,2	550	26	26	33,9
24 G 2,5	24,7	850	36	34	20,4
27 G 1,5	20,4	600	26	26	33,9
27 G 2,5	24,2	890	36	34	20,4

Maximum current capacity according to IEC 60364-5-52.

For other installation conditions, please refer to correction factors in the appendix to this catalogue.

See more technical data on the particular cable specification and on its Declaration of Performance (DoP)

Top Cable reserves the right to carry out any modification to the data sheets whatsoever without giving previous notice.

For more information please contact sales@topcable.com

