

TOXFREE[®] XTREM LSZH H07ZZ-F (AS)

The extra-flexible LSZH rubber cable for mobile service.
ACCORDING TO: EN 50525-3-21

B2_{ca}

C_{ca}



APPLICATION

Toxfree[®] Xtrem LSZH H07ZZ-F (AS) is a flexible cable for mobile service, suitable for installations where low smoke and halogen free fumes under fire conditions are required. The use nominal voltage up to 1000 V is accepted in fixed protected assemblies. Suitable for installations where the cable must withstand medium mechanical stress, for machines in industrial and agricultural workshops, for motors and transportable machines on construction sites, for windmills and for agricultural applications.

- Industrial use.
- Mobile use.
- Windmills.

CONSTRUCTION

Conductor

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

Insulation

Halogen free thermosetting rubber, type EI8 according to EN 50363-5.








The standard identification according to HD 308, is the following:

1 x	Natural
2 x	Blue + Brown
3 G	Blue + Brown + Green/Yellow
4 G	Brown + Black + Grey + Green/Yellow
5 G	Brown + Black + Grey + Blue + Green/Yellow
6 or more	Black numbered + Green/Yellow

Outer sheath

Halogen free thermosetting flexible rubber, type EM8 according to EN 50363-6.
Black colour.

CHARACTERISTICS

-  **Electrical performance**
Low voltage: 450/750 V.
-  **Thermal performance**
Maximum conductor temperature: 90°C.
Maximum short-circuit temperature: 250°C (max. 5 s).
Minimum temperature in mobile service: -40°C.
-  **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}-s1b, d1, a1 or C_{ca}-s1b, d2, a1 according to EN 50575 (see cross-section).
Halogen free according to EN 60754-1 / IEC 60754-1.
Low corrosive gases emission according to UNE-EN 60754-2 / IEC 60754-2.
Low smoke emission according to EN 61034 / IEC 61034:
Light transmittance > 60%.
-  **Mechanical performance**
Minimum bending radius: 3x cable diameter < 12 mm.
4x cable diameter ≥ 12 mm.
Impact resistance: AG2 Medium severity.
-  **Environmental performance**
Chemical & Oil resistance: Excellent.
Grease & mineral oils resistance: Excellent.
Water resistance: AD7 immersion.
-  **Installation conditions**
Open Air.
In conduit.
-  **Other**
Meter by meter marking.

STANDARDS / COMPLIANCE



According to
EN 50525-3-21



Standards and approvals
HAR / AENOR / CE

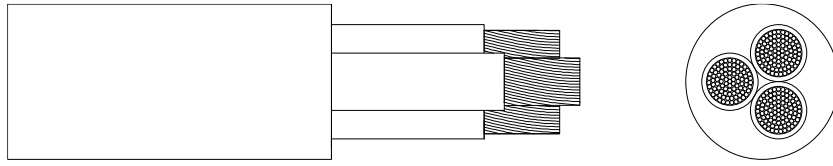


CPR (Construction Products Regulation)
B2_{ca}-s1b, d1, a1. (according to cross-section) or
C_{ca}-s1b, d2, a1. (according to cross-section)



TOXFREE® XTREM LSZH H07ZZ-F (AS)

DIMENSIONS & ADMISSIBLE INTENSITIES



Cross-Section (mm ²)	Diameter (mm)	Weight (kg/km)	Fixed Inst. (A) ¹	Mobile Service (A) ²	Voltage drop (V/A · km) ³
1 x 6	8,2	115	53	38	6,63
1 x 10	10,0	185	74	53	3,84
1 x 16	11,2	255	101	71	2,43
1 x 25	13,3	365	135	94	1,57
1 x 35	14,8	480	169	117	1,11
1 x 50	17,2	640	207	148	0,776
1 x 70	19,2	895	268	185	0,546
1 x 95	21,5	1.105	328	222	0,414
1 x 120	23,8	1.425	383	260	0,320
1 x 150	26,1	1.695	444	300	0,259
1 x 185	28,2	2.030	510	341	0,213
1 x 240	31,4	2.615	607	407	0,161
1 x 300	34,6	3.265	703	468	0,129
1 x 400	38,8	4.240	823	553	0,0974
1 x 500	41,9	5.330	946	634	0,0384
1 x 630	48,8	7.055	1.088	742	0,057
2 x 1	7,7	85	21	10	45,2
2 x 1,5	8,6	110	26	16	31,9
2 x 2,5	10,2	160	36	25	18,5
2 x 4	12,0	220	49	34	11,5
2 x 6	13,5	290	63	43	7,66
2 x 10	17,5	520	86	60	4,43
2 x 16	20,0	710	115	79	2,81
2 x 25	24,5	1.055	149	105	1,81
3 G 1	8,4	105	21	10	45,2
3 G 1,5	9,5	140	26	16	30,9
3 G 2,5	11,4	200	36	25	18,5
3 G 4	12,8	275	49	35	11,5
3 G 6	14,5	370	63	44	7,66
3 G 10	19,8	650	86	62	4,43
3 G 16	21,8	900	115	82	2,81
3 G 25	26,0	1.310	149	109	1,81
3 G 35	29,4	1.730	185	135	1,29
3 G 50	33,4	2.335	225	169	0,896
3 G 70	37,8	3.100	289	211	0,631
4 G 1	9,4	130	17	10	39,2
4 G 1,5	10,7	170	23	16	26,7
4 G 2,5	12,3	245	32	20	16,0

TOXFREE® XTREM LSZH H07ZZ-F (AS)

Cross-Section (mm ²)	Diameter (mm)	Weight (kg/km)	Fixed Inst. (A) ¹	Mobile Service (A) ²	Voltage drop (V/A · km) ³
4 G 4	14,4	345	42	30	9,95
4 G 6	16,0	460	54	37	6,63
4 G 10	21,4	815	75	52	3,84
4 G 16	24,3	1.130	100	69	2,43
4 G 25	29,5	1.685	127	92	1,57
4 G 35	32,7	2.190	158	114	1,11
4 G 50	38,0	2.995	192	143	0,776
4 G 70	43,2	4.010	246	178	0,546
4 G 95	49,1	5.250	298	210	0,413
4 G 120	52,0	6.330	346	246	0,323
4 G 150	57,5	7.835	399	282	0,256
4 G 185	63,2	9.470	456	319	0,212
4 G 240	72,1	12.360	538	377	0,161
5 G 1	10,2	160	17	10	39,2
5 G 1,5	11,5	205	23	16	26,7
5 G 2,5	13,6	295	32	20	16,0
5 G 4	15,7	425	42	30	9,95
5 G 6	17,9	565	54	38	6,63
5 G 10	23,8	995	75	54	3,84
5 G 16	27,0	1.380	100	71	2,43
5 G 25	32,5	2.045	127	94	1,57
5 G 35 *	35,8	2.645	158	114	1,11
5 G 50 *	42,0	3.675	192	143	0,776
5 G 70 *	46,7	4.855	246	178	0,546
5 G 95 *	52,5	6.310	298	210	0,413
5 G 120 *	57,2	7.705	346	246	0,323
5 G 150 *	65,1	9.615	399	282	0,256
5 G 185 *	71,4	11.625	456	319	0,212

* 07ZZ-F (these cables are outside of the range of the standard)

¹ Reference method F for single-core and method E for multicore cables according to IEC60364-5-52 in open air at 30°C ambient temperature.

² One cable in open air at 30°C ambient temperature according to EN 50565.

³ At 60°C conductor temperature and $\cos \varphi = 1$.

For cables having 2 or 3 cores, are supposed a single-phase circuit. For the rest of the cables are supposed a three-phase circuit.

TOXFREE[®] XTREM LSZH H07ZZ-F (AS)

SHORT CIRCUIT CURRENT CARRYING CAPACITIES

Time (s)	0,1	0,2	0,3	0,5	1	1,5	2	2,5	3
A/mm²	452	320	261	202	143	117	101	90	83

CORRECTION FACTORS

Air T. (°C)	30	35	40	45	50	55
Mobile service	1	0,91	0,82	0,71	0,58	0,41
Fixed installation	1	0,96	0,91	0,87	0,82	0,76