Application

ÖLFLEX® TRAIN HT 150 FF 3,6kV are single core silicone rubber insulated high temperature cables for railway rolling stock, having special fire performance.
They are designed for fixed installation and for applications, where limited movement may occur. They are particularly used in areas, where human and animal life as well as valuable property are exposed to high risk of fire hazards.
ÖLFLEX® TRAIN HT 150 FF 3,6kV are ozone-, oil-, acid and alkali-resistant according to EN 50382-2.

Application range:
Railway vehicles: Wiring of control cabinets, distributors, converters, motors and batteries

Design

Design/type-standard	according to EN 50382-2, 3600V, code designation FF FF = low temperature resistant, oil-resistant
Classification	EN 45545-2: Hazard Level HL1, HL2, HL3
Conductor	fine wire strands of tinned copper acc. to IEC/EN 60228 resp. VDE 0295, Class 5
Separator	semi-conductive tape, black
Core insulation	silicone compound type EI 111 according to EN 50382-2
Core identification	white
Sheath	silicone compound type EM 107 according to EN 50382-2, black

Electrical properties

Nominal voltage	U_0/U: 3,6/6 kV AC
Max. permissible operating voltage	U_m: 7,2 kV AC V_0: 5,4 kV DC
Test voltage	core / core: 11 kV AC; 26 kV DC

Mechanical and thermal properties

Min. bending radius	fixed installation: occasional flexing:	3 x cable diameter 5 x cable diameter
Temperature range	-40 °C to +150 °C max. conductor temperature	
Short circuit temperature	max. +250°C (5s)	

Fire protection according to EN 50382-2 / EN 45545:

Classification	EN 45545-2: Hazard Level HL1, HL2, HL3
Flammability No flame propagation acc. to	acc. to EN 60332-1-2 resp. VDE 0482-332-1-2 ≥ 12 mm: EN 60332-3-24 / VDE 0482-332-3-24 > 6 mm and < 12mm: EN 60332-3-25 / VDE 0482-332-3-25

Smoke density	acc. to EN 50382-1, light transmission: min. 70% acc. to IEC/EN 61034-2
Halogen-free	acc. to IEC/EN 60754-1 (chlorine and bromine) acc. to EN 60684-2 (fluorine)
Corrosivity	acc. to EN 50382-1: pH ≥ 4.3 and conductivity ≤ 10µS/mm acc. to IEC/EN 60754-2
Toxicity	acc. to EN 50382-1 (≤ 3) acc. to EN 50305

Material properties

Ozone resistance	acc. to EN 50382-2 / EN 50305
Mineral oil resistance	acc. to EN 50382-2 / EN 60811-2-1
Acid and alkali resistance	acc. to EN 50382-2 / EN 60811-2-1
Tests	acc. to EN 50382-2

Article number	Conductor cross section [mm²]	Max. wire ø [mm]	Max. DC conductor resistance (20°C) [Ohm/km]	Conductor ø reference value [mm]	Outer ø min. – max. [mm]	Weight [kg/km]
15382060	2,5	0,26	8,21	2,0	9,9 - 11,6	122
15382061	4	0,31	5,09	2,5	10,4 - 12,2	143
15382062	6	0,31	3,39	3,0	10,9 - 12,8	167
15382063	10	0,41	1,95	3,9	11,8 - 13,8	217
15382064	16	0,41	1,24	5,0	12,8 - 15,0	291
15382065	25	0,41	0,795	6,4	14,7 - 17,2	403
15382066	35	0,41	0,565	7,7	15,9 - 18,6	503
15382067	50	0,41	0,393	9,2	17,5 - 20,5	668
15382068	70	0,51	0,277	11,0	19,2 - 22,4	867
15382069	95	0,51	0,210	12,5	20,8 - 24,3	1110
15382070	120	0,51	0,164	14,2	22,4 - 26,2	1343
15382071	150	0,51	0,132	15,8	24,1 - 28,2	1621
15382072	185	0,51	0,108	17,5	26,4 - 30,9	2004
15382073	240	0,51	0,0817	20,1	29,4 - 34,4	2555
15382074	300	0,51	0,0654	22,5	31,7 - 37,1	3070
15382075	400	0,51	0,0486	25,8	35,0 - 40,9	3970