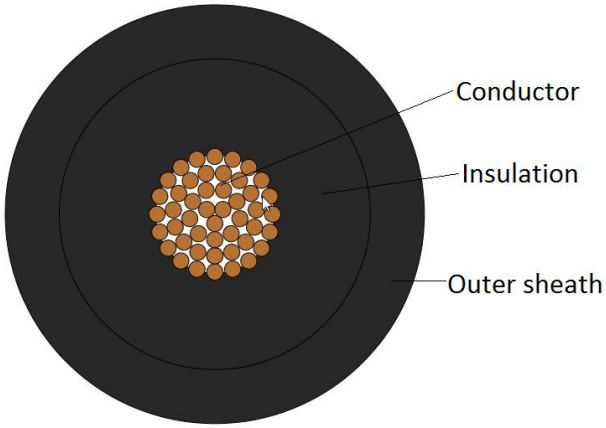
Application

ÖLFLEX® TRAIN 371 are halogen-free, highly flame retardant cables for use in railway vehicles and buses.
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 371 are oil-, fuel- , acid- and alkali resistant acc. to EN 50264-3-1.

Application range:
railway vehicles and buses: connecting lamps, heating equipment, switchgear, terminal boxes and power supply

Design



Design	according to EN 50264-3-1 1800V, MM
Approvals / Norm references	EN 50264-3-1 (VDE 0260-264-3-1). Code designation MM MM = extra low temperature, extra oil and fuel resistant
Classification	EN 45545-2: Hazard Level HL1, HL2, HL3 NF F 16-101: Internal Category A1, A2, B External Category A1, A2, B Category C for flame propagation Category F1 for smoke
Conductor	fine wire strands of tinned copper acc. to IEC/EN 60228 resp. VDE 0295, Class 5
Core isolation	electron beam cross-linked polymer compound EI 109 acc. to EN 50264-1
Core identification	Black
Outer sheath	electron beam cross-linked polymer compound, halogen free and flame retardant, EM 104 acc. to EN 50264-1 colour: Black, similar RAL 9005

Electrical properties

Nominal voltage	U_0 / U: 1.8/3 kV AC
Max. permissible operating voltage	U_m: 3.6 kV AC V_0: 2.7 kV DC
Test voltage	core / core: 6.5 kV AC; 15 kV DC

Mechanical and thermal properties

Min. bending radius	fixed installation ≤ 12 mm: 3 x cable diameter fixed installation > 12 mm: 4 x cable diameter occasional flexing ≤ 12 mm: 4 x cable diameter occasional flexing > 12 mm ≤ 20 mm: 5 x cable diameter occasional flexing > 20 mm: 6 x cable diameter
Temperature range	fixed installation: -45 °C up to +120 °C max. conductor temp. (20.000h) occasional flexing: -35 °C up to +120 °C max. conductor temp. (20.000h) - 50° according to GOST 33326-2015 and GOST 20.57.406-81 (method 203-1 und 205-1)
Short circuit temperature	max. +200°C (5s)

Fire protection according to EN 50264-1 / 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 resp. VDE 0482-332-3-24 > 6 mm und < 12mm: EN 60332-3-25 resp. VDE 0482-332-3-25 ≤ 6 mm: EN 50305
Smoke density	acc. to EN 50306-1, light transmission: min. 70% acc. to IEC 61034-2; EN 61034-2
Halogen-free	acc. to IEC 60754-1; EN 60754-1; EN 50267-2-1 (chlorine and bromine) acc. to EN 60684-2 (fluorine)
Corrosivity	acc. to EN 50264-1, pH ≥ 4.3 and conductivity ≤ 10µS/mm acc. to IEC 60754-2; EN 60754-2; EN 50267-2-2
Toxicity	acc. to EN 50264-1 (≤ 3) acc. to EN 50305

Fire protection according to NF:

Classification	NF F 16-101: Internal Category A1, A2, B External Category A1, A2, B Category C for flame propagation Category F1 for smoke
Flammability	acc. to NF C 32-070, Category C1 and C2
Smoke density	acc. to NF X 10-702
Toxicity	acc. to NF X 70-100

Material properties

Ozone resistance	acc. to EN 50264-3-1, method B acc. to EN 50305
Mineral oil resistance	acc. to EN 50264-3-1
Fuel resistance	acc. to EN 50264-3-1
Acid and alkali resistance	acc. to EN 50264-3-1
UV resistance	acc. to EN 50525-1 (VDE 0285-525-1) are cables with black sheath suitable for a permanent outdoor use.
Tests	acc. to EN 50264-3-1

Art. No.	Conductor cross section [mm²]	Max. wire ø [mm]	Max. conductor resistance (20°C) [Ohm/km]	Conductor ø reference value [mm]	Core ø reference value [mm]	Outer ø [mm]	Fire load reference value [kWh/m]	Weight [kg/km]
15371000	1.5	0.26	13.7	1.6	4.2	**5.8** -0.1+0.5	0.19	57
15371001	2.5	0.26	8.21	2.0	4.6	**6.2** -0.2+0.4	0.19	67
15371002	4	0.31	5.09	2.7	5.3	**6.9** ±0.3	0.23	90
15371003	6	0.31	3.39	3.2	5.8	**7.4** ±0.3	0.26	116
15371004	10	0.41	1.95	4.2	7.2	**8.8** ±0.3	0.35	173
15371005	16	0.41	1.24	5.2	8.2	**9.8** -0.4+0.6	0.41	244
15371006	25	0.41	0.795	6.5	10.1	**12.1** -0.4+0.8	0.60	374
15371007	35	0.41	0.565	7.7	11.3	**13.3** -0.4+1.0	0.68	488
15371008	50	0.41	0.393	9.7	13.3	**15.3** -0.4+0.9	0.81	659
15371009	70	0.51	0.277	11.4	15.0	**17.0** -0.4+1.1	0.91	875
15371010	95	0.51	0.210	13.4	17.8	**19.8** -0.4+1.0	1.21	1180
15371011	120	0.51	0.164	15.0	19.4	**21.4** -0.4+0.8	1.30	1441
15371012	150	0.51	0.132	17.0	21.4	**23.8** -0.5+0.8	1.57	1788
15371013	185	0.51	0.108	18.5	23.3	**25.7** -0.5+0.9	1.76	2166
15371014	240	0.51	0.0817	22.0	26.8	**29.2** -0.6+0.9	2.12	2775
15371015	300	0.51	0.0654	23.2	28.0	**30.4** -0.6+1.9	2.19	3367