

15301000	DATA SHEET	
valid from 2025-04-22	ÖLFLEX® TRAIN 301 TW 300V	

Application

ÖLFLEX® TRAIN 301 are halogen-free, highly flame retardant cables with reduced insulation wall thickness for use in railway vehicles.

They are designed for fixed and protected installation, further for applications, where limited movement may occur.

They are particularly used in areas, where human life as well as valuable property are exposed to high risk of fire hazards.

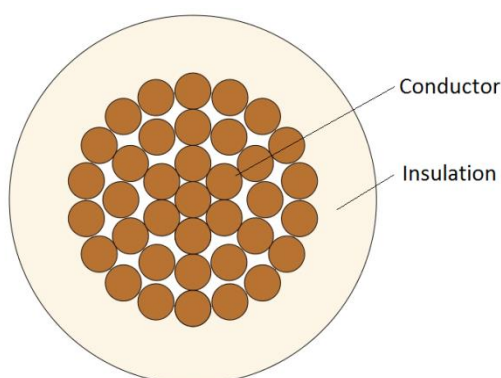
ÖLFLEX® TRAIN 301 are oil-, fuel-, acid- and alkali resistant acc. to EN 50306-2.

Relevant for the installation are the indications in EN 50355 and EN 50343.

Application range:

railway vehicles, switchboards and control panels of trains and locomotives

Design



Design	acc. to EN 50306-2
Norm references	EN 50306-2, code designation M M = 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 F0 for smoke
Conductor	tinned- copper strand, 19 or 37 wires, SRC (Special Round Conductor) acc. to EN 50306-2
Core insulation	electron beam cross-linked polymer compound acc. to EN 50306-2
Core identification	colour: white

Electrical properties

Nominal voltage	U ₀ / U: 300/300 V AC acc. to EN 50306-2 U _m : 320V AC acc. to EN 50306-2 U ₀ / U: 600/1000 V AC acc. to Lapp
Test voltage	3.5 kV AC or 8.4 kV DC

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Mechanical and thermal properties

Min. bending radius	4 x outer diameter for cautions bending (one bend at end of core): 3 x outer diameter
Temperature range	- 40 °C up to +105 °C max. conductor temp. up to +125 °C max. conductor temp. (20.000h) - 50° acc. to GOST 33326-2015 and GOST 20.57.406-81 (method 203-1 und 205-1)
Short circuit temperature	max. +160°C (5s)

Fire protection acc. to EN 50306-2 / EN 45545-2:

Classification	EN 45545-2: Hazard Level HL1, HL2, HL3
Flammability	flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2 no flame propagation acc. to EN 50305, clause 9.1.2
Smoke density	acc. to EN 50306-1, light transmission: min. 70% acc. to IEC 61034-2 resp. EN 61034-2
Halogen-free	acc. to IEC 60754-1 resp. EN 60754-1 (chlorine and bromine) acc. to EN 60684-2 (fluorine)
Corrosivity	acc. to EN 50306-1, pH ≥ 4.3 and conductivity ≤ 10µS/mm acc. to IEC 60754-2 resp. EN 60754-2
Toxicity	acc. to EN 50306-2 (≤ 6) EN 50305

Fire protection acc. to NF:

Classification	NF F 16-101: Internal Category A1, A2, B External Category A1, A2, B Category C for flame propagation Category F0 for smoke
Flammability	no flame propagation 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 50306-2, method A or B
Mineral oil resistance	acc. to EN 50306-2
Fuel resistance	acc. to EN 50306-2
Acid and alkali resistance	acc. to EN 50306-2
Tests	acc. to EN 50306-2
General requirements	These cables are conform to the EU-Directives 2014/35/EC (Low Voltage Directive)

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Environmental information

These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).

Art. No.	Conductor cross section [mm ²]	Conductor [n x mmø]	Max. conductor resistance (20°C) [Ohm/km]	Conductor ø reference value [mm]	Min. Core ø [mm]	Max. Core ø [mm]	Fire load reference value [kJ/m]	Weight [kg/km]
15301000	0.5	19x0.18	40.1	0.9	1.15	1.45	17	6
15301001	0.75	37x0.16*	26.7	1.1	1.35	1.65	20	8
15301002	1	37x0.18*	20.0	1.2	1.40	1.80	23	11
15301003	1.5	37x0.23*	13.7	1.6	1.90	2.30	36	17
15301004	2.5	37x0.30*	8.21	2.1	2.45	2.85	65	28

* These cables may be supplied in 19 strand conductors.

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