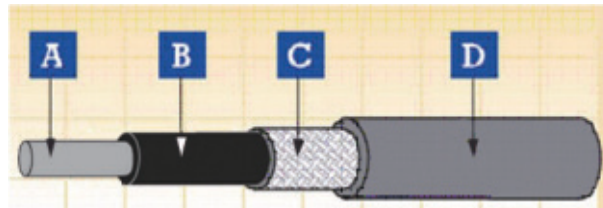


## FIREROL Thin Wall Single Core Screened & Sheathed Cables 300/500 V EN 50306-3 (FRL-TW-05S-OS)



A Conductor B. Insulation C. Screen D. Sheath

### Application

- Used as signal and control cable for protected installations inside and outside of rail and transport vehicles, where space and weight are an important factor.
- Used in cable harnesses, switchboards and control panels, driver desks etc.

### Construction

#### Conductor

Tinned annealed copper wires as defined in EN 50306-2

#### Insulation

LSZH special compound

#### Overall Screen

Tinned annealed copper wires

#### Outer Sheath

LSZH special compound (S1 & S2)

### Electrical & Mechanical Properties

Nominal Voltage	300/500 V
Max. Conductor Temperature	90 °C /105 °C (fixed installation)
Min. Permissible Ambient Temperature	-25 °C /-40 °C (fixed installation)
Bending Radius	10 x Overall Diameter

### Chemical & Environmental Properties

EN 60684-2	No fluorine
EN 50305; EN 60811-2-1	Resistance to mineral oil & fuel oil, acid & alkali
EN 50305	Resistance to ozone

### Fire Performance for Rolling Stock Application

EN 50306-2	Hazard levels HL1, HL2/HL3, HL4
DIN 5510-2	Protection level 1/2/3/4
BS 6853	Interior use 1a, 1b, II; Exterior use 1a, 1b, II
NF F 16-101	F0

### Fire Performance in General

EN 50265-2-1; IEC 60332-1-2; NF C 32-070 2.1 (C2)	Vertical flame propagation for a single insulated wire or cable
EN 50266-2-4 + EN 50305; IEC 60332-3-24;	Vertical flame spread of vertically mounted bunched wires or cables
NF C 32-070 2.2 (C1); VDE 0472 Teil 804	
EN 50268-2; IEC 61034-2; NF C 32-073 ;	Low Smoke Emission
NF C 20-902; NF F 16 101; VDE 0472 Teil 816	
EN 50267-2-1; IEC 60754-1; NF C 32-074;	Halogen Free
NF C 20-454; VDE 0472 Teil 815	
EN 50267-2-2/3; IEC 60754-2; NF C 32-074;	Low Corrosivity (Acidity & Conductivity)
NF C 20-453; VDE 0472 Teil 813	
EN 50305; NF X 70-100; NF F 63 808; TM1-04; BS6853	Low Toxicity
NF F 63 808; BS6853; NF F 16 101	Smoke Index



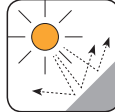
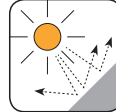











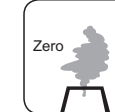
# EN 50306 Rolling Stock Cables

FRL-TW-05S-OS 300/500 V

Number of Cores and Nominal Cross Section	Min. Thickness of Sheath at any Point	Overall Diameter		Weight
		Min.	Max.	
n x mm <sup>2</sup>	mm	mm	mm	kg/km
1 x 0.5	0.20	2.3	2.8	10
1 x 0.75	0.20	2.5	3.0	20
1 x 1	0.20	2.7	3.2	25
1 x 1.5	0.20	3.1	3.6	30
1 x 2.5	0.20	3.6	4.4	40



EN 50306 Rolling Stock Cables

 Impact Resistant	 Highly Flexible	 UV Resistant	 Ozone Resistant	 Abrasion Retardant	 Cold Resistant	 Resistance To Soldering Heat	 Acid & Alkaline Resistant
 IRM 903 Fuel Oil Resistant	 IRM 902 Mineral Oil Resistant	 Fire Retardant NF C32-070-2.2(C1) IEC60332-3-24/EN50266-2-4	 Flame Retardant NF C32-070-2.1(C2) IEC60332-1-2/EN50265-2-1	 Low Toxicity EN 50305; NF X70-100/NF F63 809/TM1-04/BS 6853	 Low Corrosivity IEC60754-2/EN50267-2-2/3 NF C32-074/NF C20-453	 Low Smoke Emission IEC 61034-2 / EN 50268-2 NF C32-073/NF C 20-902	 Zero IEC 60754-1/EN 50267-2-1 NF C20-454