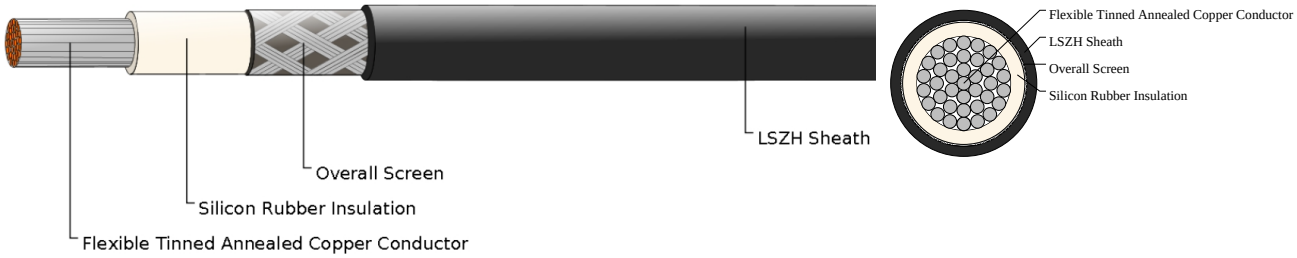
Caledonian

EN 50382 High Temperature Rolling Stock Cables

www.caledonian-cables.com marketing@caledonian-cables.com

FIREROL High Temperature Single Core Screened & Sheathed Cables

EN 50382-2 (FRL-HT-3S-OS)



VOLTAGE RATING

1.8/3 kV

CABLE CONSTRUCTION

Conductor:Flexible tinned annealed copper wires(red copper only for 150 °C core temperature)class 5 according to HD 383

Insulation:Silicon rubber according to EN 50382-1 (EI 112)

Overal Screen:Tinned annealed copper wires

Outer Sheath:LSZH elastomeric compound according to EN 50382-1 (EM 105, EM 106 or EM 107)

MECHANICAL PROPERTIES

Max. Conductor Temperature: 120 °C/150 °C (fixed installation)

Min. Permissible Ambient Temperature: -25 °C/-40 °C (fixed installation)

Bending Radius: 3 x Overall Diameter (D<12mm); 4 x Overall Diameter (D>12mm)

CHEMICAL AND ENVIRONMENTAL PROPERTIE

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
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
EN45545-2	R15 Interior/ R16 Exterior HL1, HL2, HL3

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

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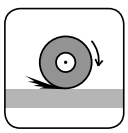
EN 50266-2-4 + EN 50305; IEC 60332-3-24;NF C 32-070 2.2 (C1); VDE 0472 Teil 804	Vertical flame spread of vertically mounted bunched wires or cables
EN 50268-2; IEC 61034-2; NF C 32-073 ;NF C 20-902; NF F 16 101; VDE 0472 Teil 816	Low Smoke Emission
EN 50267-2-1; IEC 60754-1; NF C 32-074;NF C 20-454; VDE 0472 Teil 815	Halogen Free
EN 50267-2-2/3; IEC 60754-2; NF C 32-074;NF C 20-453; VDE 0472 Teil 813	Low Corrosivity (Acidity & Conductivity)
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
EN45545-2	Requirement for fire behavior of materials & components R15/R16

DIMENSION AND PARAMETERS

Nominal Cross-sectional Area	Conductor Diameter	Min. Mean Thickness of Insulation	Min. Average Sheath Thickness	Overall Diameter (min.)	Overall Diameter (max.)	Min. Wire Diameter of Screen	Approx. Weight	Max. Conductor Resistance (Tinned Conductor at 20 °C	Max. Conductor Resistance (Plain Conductor at 20 °C	Min. Insulation Resistance at 20 °C	Min. Insulation Resistance at 150 °C
mm²	mm	mm	mm	mm	mm	mm	kg/km	Ω/km	Ω/km	MΩ × km	MΩ × km
120	14.2	2.2	1.6	20.8	24.3	0.31	1819	0.164	0.161	180	0.30


Abrasion Retardant

Acid & Alkaline Resistant

Cold 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

Highly Flexible

Impact Resistant

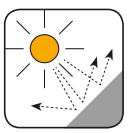
IRM 902
Mineral Oil Resistant

IRM 903
Fuel Oil Resistant

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

Low Toxicity
EN 50305; NF X70-100/NF
F63 808/TM1-04/BS 6853


Ozone Resistant

Resistance To
Soldering Heat

UV Resistant

Zero Halogen
IEC 60754-1/EN 50267-2-1
NF C20-454