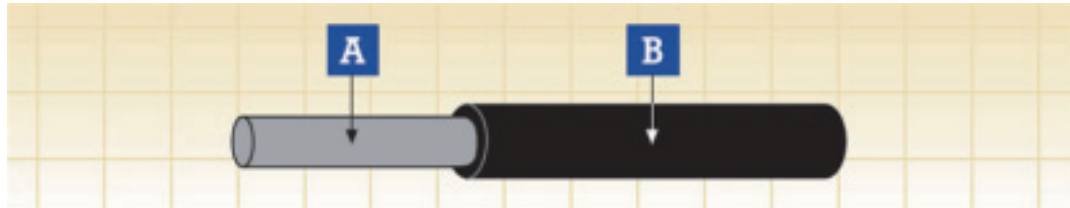


## FIREROL Thin Wall Single Core Unsheathed Cables

### 250 V

### NF F 63-808 (FRF-TW-025SU)



A. Conductor B. Insulation

### Application

These cables are 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, suitable for use in cable harnesses, switchboards and control panels, driver desks etc

### Construction

Conductor

Stranded tinned copper wires

Insulation

Radiation crosslinkable LSZH compound

### Electrical & Mechanical Properties

Nominal Voltage	250 V
Max. Conductor Temperature	105 °C/125 °C
Temperature Range	-40 °C~+105 °C
Bending Radius	5 × Overall Diameter

### Standards

NF F 63-808  
 NF F 16-101  
 BS 6853  
 DIN 5510

### Fire Performance in General

EN 50265-2-1; IEC 60332-1-2; NF C 32-070 2.1 (C2)  
 EN 50266-2-4 + EN 50305; IEC 60332-3-24;  
 NF C 32-070 2.2 (C1); VDE 0472 Teil 804  
 EN 50268-2; IEC 61034-2; NF C 32-073 ;  
 NF C 20-902; NF F 16 101; VDE 0472 Teil 816  
 EN 50267-2-1; IEC 60754-1; NF C 32-074;  
 NF C 20-454; VDE 0472 Teil 815  
 EN 50267-2-2/3; IEC 60754-2; NF C 32-074;  
 NF C 20-453; VDE 0472 Teil 813  
 EN 50305; NF X 70-100; NF F 63 808; TM1-04; BS6853  
 NF F 63 808; BS6853; NF F 16 101

Vertical flame propagation for a single insulated wire or cable  
 Vertical flame spread of vertically mounted bunched wires or cables

Low Smoke Emission

Halogen Free

Low Corrosivity (Acidity & Conductivity)

Low Toxicity  
 Smoke Index



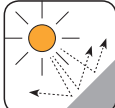
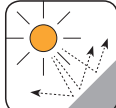












# NF F 63-808 Rolling Stock Cables

FRF-TW-025SU 250 V

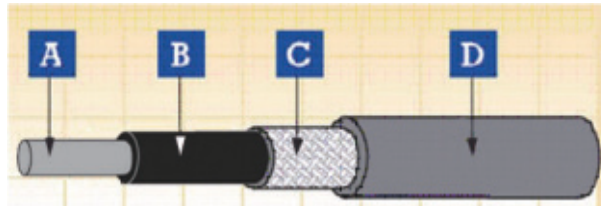
Nominal Cross-Sectional Area	Number & Nominal Diameter of Strands	Overall Diameter		Weight
		Min.	Max.	
mm <sup>2</sup>	No/mm	mm	mm	kg/km
0.38	19/0.16	1.15	1.35	4.7
0.60	19/0.20	1.30	1.55	6.5
0.93	19/0.25	1.55	1.80	9.9
1.34	19/0.30	1.80	2.00	14.0
1.82	37/0.25	2.10	2.40	18.4
2.61	37/0.30	2.50	2.80	27.8
4.32	61/0.30	3.00	3.30	44.2



NF F 63-808 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 808/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 Halogen IEC 60754-1/EN 50267-2-1 NF C20-454

## FIREROL Thin Wall Screened Single Core Cables With Standard Wall Sheath 250 V NF F 63-808 (FRF-TW-025S-OS)



A. Conductor B. Insulation C. Screen D. Sheath

### Application

These cables are 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, suitable for use in cable harnesses, switchboards and control panels, driver desks etc.

### Construction

#### Conductor

Stranded tinned copper wires

#### Insulation

Radiation crosslinkable LSZH compound

#### Screen

Tinned copper braid

#### Sheath

Radiation crosslinkable LSZH compound

### Electrical & Mechanical Properties

Nominal Voltage	250 V
Max. Conductor Temperature	105 °C/125 °C
Temperature Range	-40 °C~+105 °C
Bending Radius	5 × Overall Diameter

### Standards

NF F 63-808  
NF F 16-101  
BS 6853  
DIN 5510

### 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; 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 NF F 63 808; BS6853; NF F 16 101	Low Toxicity Smoke Index



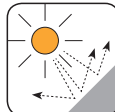
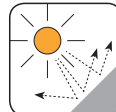
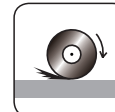
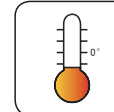
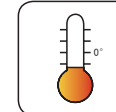








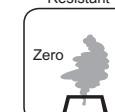
# NF F 63-808 Rolling Stock Cables

FRF-TW-025S-OS 250 V

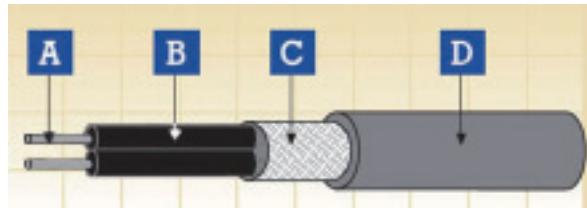
Nominal Cross-Sectional Area	Number & Nominal Diameter of Strands	Overall Diameter		Weight
		Min.	Max.	
mm <sup>2</sup>	No/mm	mm	mm	kg/km
0.38	19/0.16	2.05	2.55	11.5
0.60	19/0.20	2.30	2.80	15.0
0.93	19/0.25	2.50	3.00	18.8
1.34	19/0.30	2.70	3.20	24.2
1.82	37/0.25	3.30	3.75	32.0
2.61	37/0.30	3.60	4.20	43.0
4.32	61/0.30	4.15	4.75	63.0



NF F 63-808 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 808/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

## FIREROL Thin Wall Multicore Screened Cables With Standard Wall Sheath 250 V NF F 63-808 (FRF-TW-025M-OS)



A. Conductor B. Insulation C. Screen D. Sheath

### Application

These cables are 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, suitable for use in cable harnesses, switchboards and control panels, driver desks etc.

### Construction

#### Conductor

Stranded tinned copper wires

#### Insulation

Radiation crosslinkable LSZH compound

#### Screen

Tinned copper braid

#### Sheath

Radiation crosslinkable LSZH compound

### Electrical & Mechanical Properties

Nominal Voltage	250 V
Max. Conductor Temperature	105 °C/125 °C
Temperature Range	-40 °C~+105 °C
Bending Radius	5 × Overall Diameter

### Standards

NF F 63-808  
NF F 16-101  
BS 6853  
DIN 5510

### Fire Performance in General

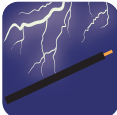

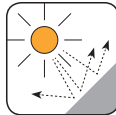
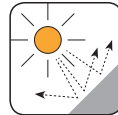
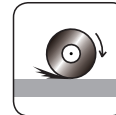
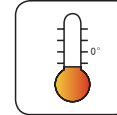
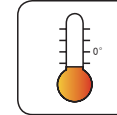








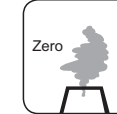
EN 50265-2-1; IEC 60332-1-2; NF C 32-070 2.1 (C2)	Vertical flame propagation for a single insulated wire or cable
EN 50266-2-4 + EN 50305; IEC 60332-3-24; NF C 32-070 2.2 (C1); VDE 0472 Teil 804	Vertical flame spread of vertically mounted bunched wires or cables
EN 50268-2; IEC 61034-2; NF C 32-073 ; 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 NF F 63 808; BS6853; NF F 16 101	Low Toxicity Smoke Index

# NF F 63-808 Rolling Stock Cables

FRF-TW-025M-OS 250 V

Number of Cores	Nominal Cross-Sectional Area	Number & Nominal Diameter of Strands	Overall Diameter		Weight
			Min.	Max.	
-	mm <sup>2</sup>	No/mm	mm	mm	kg/km
2	0.38	19/0.16	3.20	4.00	20.0
2	0.60	19/0.20	3.70	4.50	32.0
2	0.93	19/0.25	4.25	5.05	39.5
2	1.34	19/0.30	4.80	5.60	54.0
2	1.82	37/0.25	5.55	6.35	66.0
2	2.61	37/0.30	6.35	7.15	87.0
2	4.32	61/0.30	7.50	8.30	128.0
3	0.38	19/0.16	3.55	4.35	30.0
3	0.60	19/0.20	4.00	4.80	39.0
3	0.93	19/0.25	4.50	5.30	55.0
3	1.34	19/0.30	5.10	5.90	66.0
3	1.82	37/0.25	4.80	6.60	84.0
3	2.61	37/0.30	6.80	7.60	117.0
3	4.32	61/0.30	8.10	8.90	182.0
4	0.38	19/0.16	4.05	4.85	39.0
4	0.60	19/0.20	4.50	5.30	51.0
4	0.93	19/0.25	5.00	5.80	70.0
4	1.34	19/0.30	5.70	6.50	89.0
4	1.82	37/0.25	6.45	7.25	109.0
4	2.61	37/0.30	7.65	8.45	157.0
4	4.32	61/0.30	9.05	9.85	237.0



 Corona 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 808/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 Halogen IEC 60754-1/EN 50267-2-1 NF C20-454