Nexans

Halogen free cables
FLAMEX

ELECTRONIC

Filotex®

FLAMEX

Electronic halogen free hook-up and coaxial cables for shipboard and railways

100% halogen free cables

140 – 146 rue E. Delacroix / BP 1
F – 91211 Draveil cedex – FRANCE
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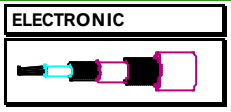

Summary

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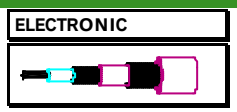

Introduction to FLAMEX

The FLAMEX product range is 100% halogen free.

The FLAMEX products are implemented in flame and fire sensitive environment.

They are mainly intended for the data transmission :

- in the industry (e.g. oil and chemical applications),
- in shipboard applications and
- in rolling stock applications

They can be used :

- for the wiring of electronic equipment (FLAMEX SH24 hook – up wires) or
- for High Frequency transmission (FLAMEX RG coaxial cables).

Advantages

- Low smoke emission according to IEC 1034-2,
- Low toxicity and corrosivity of evolved gases after burning :
  - Halogen free content according to IEC754-1
  - pH > 4 according to IEC754-2
  - Conductivity < 100 µS/cm to IEC754-2
- Weight and place saving (thin wall insulation : 0.2 to 0.3mm insulation thickness),
- Good Flexibility,
- High mechanical resistance (against abrasion, tensile strength and cut through) : no additional protection required,
- Excellent chemical resistance (against acids, alkalis, oil, gazoil, …)
- The FLAMEX RG product range complies with the MIL C17 specifications regarding electrical and dimensional values (also NFC 93 550 compliance).

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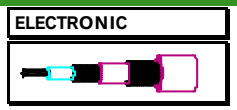

FLAMEX Product Range

- Single core cables:
  - ✓ Unscreened and unjacketed (FLAMEX 24 ..)
  - ✓ Screened and jacketed (FLAMEX 24 16 .. BLG)
- Multi-core cables (pair, triple and quad):
  - ✓ Unscreened and jacketed (FLAMEX 24 16 ..x.. G)
  - ✓ Screened and jacketed (FLAMEX 24 16 ..x.. BLG)
- Cross section : 24 to 14 AWG
- Coaxial cables 50 Ω and 75 Ω (FLAMEX RG)

Main Data

- Strictly halogen free in compliance with IEC1034-1/2,
- Operating voltage : 750V (mono), 250V (multi),
- Operating temperature : +150°C (unjacketed)
  +105°C (jacketed),
- Good elongation property (> 130%) (single core),
- High tensile strength (> 45 MPa) (single core),
- Good abrasion resistance (single core : > 500 cycles by 5N load, NFF 63808)
- Low smoke index (IF < 3 and NF 16101),
- Non toxic cable (ITC < 3 and NF 16101),
- Non corrosive cable (IEC 754-1/2 and VDE 0472 Teil 813 & 815).

Norms and approvals

These halogen free cables are flame and fire retardant according to :

- IEC 332 - 1 / 2 / 3 Cat. C,
- NFC 32070 - C1 & - C2 (except for Flamex RG),
- VDE 0472 Teil 804,
- BS 4066 1/2/3,

The FLAMEX cables have been approved for different applications :

- Navy approvals (Bureau Veritas, AO14000),
- Railways approvals (TM1 – 04, NFF 63808, EN 50306 / single core).

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Hook - up Wires : FLAMEX range

PRODUCT REFERENCES

FLAMEX SH24 SERIES

CONSTRUCTION

① CONDUCTOR
Stranded annealed Tin Copper

② INSULATION : Halogen free FLAMEX SH24

③ SCREEN : Braid
Tin Plated Copper (+Tape)

④ JACKET : Halogen free (M16) black
∅ = see the chart next page

Applications

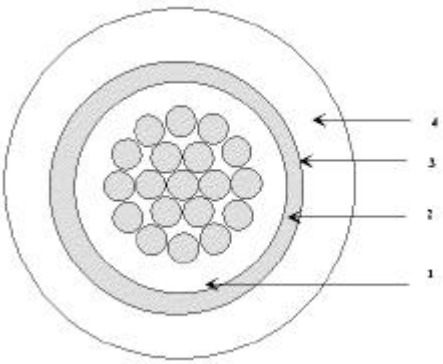
- Data transmission for on - board instrumentation and control equipment.

Fire Performance :

- Flame and fire retardant (IEC 332 – 1/2/3 Cat C),
- Halogen free cable (IEC 754 – 1),
- Non corrosive and non toxic cable (IEC 754 – 2),
- Low smoke emission and opacity (IEC 1034).

Main data :

- High temperature resistance (150°C : FLAMEX SH24),
- Small size (thin wall cables),
- Light weight (thin wall cables),
- High mechanical properties,
- High chemical resistance (acids, alkalis, oil, …),
- Operating voltage : 750V.



Standards

- Approved Bureau Veritas,
- IEC332 – 3 Cat C,
- IEC 754 - 1 & - 2, IEC 1034,
- BS 6853 Cat Ia.

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FLAMEX SH24 : insulation properties

Electrical properties	Methods & Norms	FLAMEX SH24
Operating voltage	TM1 – 04, NFF 63808	750 V
Dielectric constant (ε_r)	TM1 – 04, NFF 63808	2,67
Insulation resistance (20°C)	TM1 – 04, NFF 63808	> 6 GΩ.km
Mechanical properties	**Methods & Norms**	**FLAMEX SH24**
Operating temperature	TM1 - 04, NFF 63808	- 50°C to + 150°C
Tensile strength	TM1 - 04, NFF 63808	> 45 MPa
Elongation	TM1 - 04, NFF 63808	> 130 %
Static bending radius	TM1 - 04, NFF 63808	> 5 x ∅
Dynamic bending radius		> 12 x ∅
Low temperature bend		Pass at – 55°C
Abrasion	TM1 - 04, NFF 63808, MIL T 5438	Pass >500 cycles, MIL :>1,5m
Flexibility		Good
Notch propagation (0.05mm)	TM1 - 04, NFF 63808, BSG 230	Pass, BSG : Pass at 150°C
Welding withstand		Excellent
Shrinkage at 200°C	TM1 - 04, NFF 63808	< 2 %
Fire hazard properties	**Methods & Norms**	**FLAMEX SH24**
Flammability	IEC332-1/2/3, NFC32070 C1/C2, VDE 0472 Teil 804 Var. A/B/C, BS 4066 1/2/3, IEC 2035, IEC 2022 2/3, BS 6853 Cat Ia	Pass
Smoke index	NFF 16101, NFF 63808, BS 6853 Cat Ia	Pass, IF < 3 level 0
Smoke density	VDE0472 Teil816, IEC1034, IEC 2037-3	Pass
Toxicity index	TM1 - 04, NFF 63808, BS 6853 Cat Ia	Pass, ITC < 3
Halogen content	IEC 754-1, VDE 0472 Teil 815, IEC 2037-1	Pass, < 0.2%
Acidity (pH > 3,5)	IEC 754-2, VDE 0472 Teil 813	Pass, pH > 4
Conductivity (<100µS/cm)	IEC 754-2, VDE 0472 Teil 813	Pass, < 100 µS/cm
Chemical properties	**Methods & Norms**	**FLAMEX SH24**
Acids	TM1 – 05, NFF 63826	Pass
Alkalis	TM1 – 05, NFF 63826	Pass
Hydrocarbon solvents	UIC 895	Pass
Midel 7131	TM1 – 04, NFF 63808	Pass
Oil	TM1 – 04, NFF 63808	Pass
Silicone	TM1 – 04, NFF 63808	Pass
Hydraulic Fluid	TM1 – 04, NFF 63808	Pass

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FLAMEX M16 : jacket properties

Electrical properties	Methods & Norms	FLAMEX M16
Operating voltage	TM1 – 04, NFF 63808	Not applicable
Dielectric constant (ε_r)	TM1 – 04, NFF 63808	Not applicable
Insulation resistance (20°C)	TM1 – 04, NFF 63808	Not applicable

Mechanical properties	Methods & Norms	FLAMEX M16
Operating temperature	TM1 - 04, NFF 63808	- 30°C to + 105°C
Tensile strength	TM1 - 04, NFF 63808	> 10 MPa
Elongation	TM1 - 04, NFF 63808	> 150 %
Static bending radius	TM1 - 04, NFF 63808	> 8 x ∅
Dynamic bending radius		> 15 x ∅
Low temperature bend		Pass at – 35°C
Abrasion	TM1 - 04, NFF 63808	Pass
Flexibility		Good

Fire hazard properties	Methods & Norms	FLAMEX M16
Flammability	IEC332-1/2/3, NFC32070 C1/C2, VDE 0472 Teil 804 Var. A/B/C, BS 4066 1/2/3, IEC 2035, IEC 2022 2/3, BS 6853 Cat Ia	Pass
Smoke index	NFF 16101, NFF 63808, BS 6853 Cat Ia	Pass, IF<3 acc. to NFF16101
Smoke density	VDE0472 Teil816, IEC1034, IEC 2037-3	Pass
Toxicity index	TM1 - 04, NFF 63808, BS 6853 Cat Ia	Pass, ITC < 3
Halogen content	IEC 754-1, VDE 0472 Teil 815, IEC 2037-1	Pass, < 0.2%
Acidity (pH > 3,5)	IEC 754-2, VDE 0472 Teil 813	Pass, pH > 4
Conductivity (<100µS/cm)	IEC 754-2, VDE 0472 Teil 813	Pass, < 100 µS/cm

Chemical properties	Methods & Norms	FLAMEX M16
Acids	TM1 – 05, NFF 63826	Pass
Alkalis	TM1 – 05, NFF 63826	Pass
Hydrocarbon solvents	UIC 895	Pass
Midel 7131	TM1 – 04, NFF 63808	Pass
Oil ASTM2	TM1 – 04, NFF 63808	Pass
Silicone	TM1 – 04, NFF 63808	Pass
Hydraulic Fluid	TM1 – 04, NFF 63808	Pass

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FLAMEX M12 : jacket properties

Electrical properties	Methods & Norms	FLAMEX M12
Operating voltage	TM1 – 05, NFF 63826	Not applicable
Dielectric constant (ε_r)	TM1 – 05, NFF 63826	Not applicable
Insulation resistance (20°C)	TM1 – 05, NFF 63826	Not applicable

Mechanical properties	Methods & Norms	FLAMEX M12
Operating temperature	TM1 – 05, NFF 63826	- 30°C to + 105°C
Tensile strength	TM1 – 05, NFF 63826	> 10 Mpa
Elongation	TM1 – 05, NFF 63826	> 150 %
Static bending radius	TM1 – 05, NFF 63826	> 8 x ∅
Dynamic bending radius		> 15 x ∅
Low temperature bend		Pass at – 35°C
Abrasion	TM1 – 05, NFF 63826	Pass
Flexibility		Good

Fire hazard properties	Methods & Norms	FLAMEX M12
Flammability	IEC332-1/2/3, NFC32070 C1/C2, VDE 0472 Teil 804 Var. A/B/C, BS 4066 1/2/3, IEC 2035, IEC 2022 2/3	Pass
Smoke index	NFF 16101, NFF 63808	Pass, IF<5 acc. to NFF16101
Smoke density	VDE0472 Teil816, IEC1034, IEC 2037-3	Pass
Toxicity index	TM1 - 04, NFF 63808	Pass, ITC < 5
Halogen content	IEC 754-1, VDE 0472 Teil 815, IEC 2037-1	Pass, < 0.2%
Acidity (pH > 3,5)	IEC 754-2, VDE 0472 Teil 813	Pass, pH > 4
Conductivity (<100µS/cm)	IEC 754-2, VDE 0472 Teil 813	Pass, < 100 µS/cm

Chemical properties	Methods & Norms	FLAMEX M12
Acids	TM1 – 05, NFF 63826	Pass
Alkalis	TM1 – 05, NFF 63826	Pass
Hydrocarbon solvents	UIC 895	Pass
Midel 7131	TM1 – 05, NFF 63826	Pass
Oil ASTM2	TM1 – 05, NFF 63826	Pass
Silicone	TM1 – 05, NFF 63826	Pass
Hydraulic Fluid	TM1 – 05, NFF 63826	Pass

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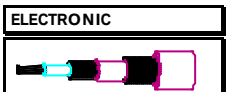

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FLAMEX M12 and M16 jacket : Main differences

FLAMEX M16 jacket

- For thin wall thickness application (0.40 mm),
- In compliance with the NFF 63808 norm,
- Operating temperature from –40°C to +105°C,
- Tensile strength : > 10 Mpa,
- Elongation : > 150%

FLAMEX M12 jacket

- For larger wall thickness application (> 1.05 mm),
- For external use,
- In compliance with the NF 63826 norm,
- Operating temperature from –30°C to +105°C,
- Tensile strength : > 10 Mpa,
- Elongation : > 150%

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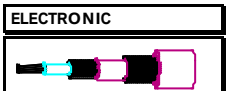

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Hook - up Wires : FLAMEX range

Unscreened and unjacketed Hook-up Wires

Designation	Conductor Gauge AWG	Conductor Stranding n x ∅	Section (mm^2)	Insulation Min. ∅ (mm)	Insulation Max. ∅ (mm)	Average Weight (kg / km)
FLAMEX 24 0.38	22	19 x 0.16 TC	0.38	1.10	1.30	4.60
FLAMEX 24 0.60	20	19 x 0.20 TC	0.60	1.30	1.50	6.80
FLAMEX 24 0.93	18	19 x 0.25 TC	0.93	1.55	1.75	10.20
FLAMEX 24 1.00	18	32 x 0.20 TC	1.00	1.60	1.80	10.70
FLAMEX 24 1.34	16	19 x 0.30 TC	1.34	1.80	2.00	14.00
FLAMEX 24 1.50	16	37 x 0.23 TC	1.50	1.95	2.15	15.80
FLAMEX 24 1.82	14	37 x 0.25 TC	1.82	2.10	2.40	19.10
FLAMEX 24 2.50	14	37 x 0.30 TC	2.50	2.35	2.65	26.10
FLAMEX 24 2.61	14	37 x 0.30 TC	2.61	2.50	2.80	27.20
FLAMEX 24 4.32	12	61 x 0.30 TC	4.32	3.00	3.30	43.40

TC : Tinned Copper

❒ Standard color coding and marking for the following sections (according to NFF63808):

0.60 (AWG20)	0.93 (AWG18)	1.34 (AWG16)	1.82 (AWG14)	2.61 (AWG14)	4.32 (AWG12)
Yellow	White	Green	Yellow	White	Green

- Marking : E X.XX – NFF 63-808-239-FILOTEX P2- ** ** (X.XX : cross section, ** ** production week and year),
- Above mentioned versions are usually in stock,

❒ Other sections (0.38, 1.00, 1.50, 2.50) are available on request without any NFF63808 marking,

❒ Other colors: color available for any FLAMEX 24 cross section : white, blue, yellow – green, brown, black, red, grey (no NFF63808 marking),

❒ Smaller sections on request.

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Hook - up Wires : FLAMEX range M16 jacket

Screened and Jacketed Hook-up Wires

Designation	Gauge AWG	Conductor Stranding n x ∅	Conductor Section (mm^2)	Insulation Nominal ∅ (mm)	Cable Nominal ∅ (mm)	Average Weight (kg / km)
FLAMEX 24 16 0.38 BLG	22	19 x 0.16 TC	0.38	1.20 ± 0.10	2.25 ± 0.20	11.50
FLAMEX 24 16 0.60 BLG	20	19 x 0.20 TC	0.60	1.40 ± 0.10	2.55 ± 0.20	14.50
FLAMEX 24 16 0.93 BLG	18	19 x 0.25 TC	0.93	1.65 ± 0.10	2.70 ± 0.20	19.00
FLAMEX 24 16 1.00 BLG	18	32 x 0.20 TC	1.00	1.70 ± 0.10	2.70 ± 0.20	19.00
FLAMEX 24 16 1.34 BLG	16	19 x 0.30 TC	1.34	1.90 ± 0.10	2.95 ± 0.20	24.00
FLAMEX 24 16 1.50 BLG	16	37 x 0.23 TC	1.50	2.05± 0.10	3.10 ± 0.20	27.00
FLAMEX 24 16 1.82 BLG	14	37 x 0.25 TC	1.82	2.25 ± 0.15	3.40 ± 0.20	32.00
FLAMEX 24 16 2.50 BLG	14	37 x 0.30 TC	2.50	2.50 ± 0.15	3.80 ± 0.25	43.00
FLAMEX 24 16 2.61 BLG	14	37 x 0.30 TC	2.61	2.65 ± 0.15	3.90 ± 0.30	44.00
FLAMEX 24 16 4.32 BLG	12	61 x 0.30 TC	4.32	2.15 ± 0.15	4.40 ± 0.30	62.00

TC : Tinned Copper

- Standard color coding for the following sections (according to NFF63808):

0.60 (AWG20)	0.93 (AWG18)	1.34 (AWG16)	1.82 (AWG14)	2.61 (AWG14)	4.32 (AWG12)
Yellow	White	Green	Yellow	White	Green

  - Marking : E-BLG X.XX – NFF 63-808-239-FILOTEX P2- ** ** (X.XX : cross section, ** ** production week and year) - ONLY FOR 0.93 & 1.34 models.
  - Above mentioned versions are usually in stock,
- Other sections (0.38, 0.60, 1.00, 1.50, 1.82, 2.50, 2.61, 4.32) are available on request without any NFF63808 marking,
- Other colors: color available for any FLAMEX 24 cross section : white, blue, yellow – green, brown, black, red, grey (no NFF63808 marking),
- Smaller sections on request.

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Filotex®

Screened Pair Cable
Halogen free

Applications

- Hook-up multi core cable for on – board electronic equipment,
- dedicated to the rolling stock and shipboard industry.

PRODUCT REFERENCES

FLAMEX SH24 SERIES

Main data

- Halogen free conductor type FLAMEX (acc. to IEC754-1),
- Fire performance : flame and fire retardant (IEC 332-1/2/3 Cat C)
- Low smoke generation (IF < 3),
- Non toxic (ITC < 3) and non corrosive (IEC754-1/2) cable,
- Thin wall cable : lightness & weight performance,
- Operating temperature : -30°C to + 105°C,
- Bending radius : 8 x ∅ (static), 15 x ∅ (dynamic).

CONSTRUCTION

① CONDUCTOR (A) :
Stranded Tin plated Copper
Section : see next page
DIELECTRIC : Halogen free FLAMEX SH24
∅ = see next page

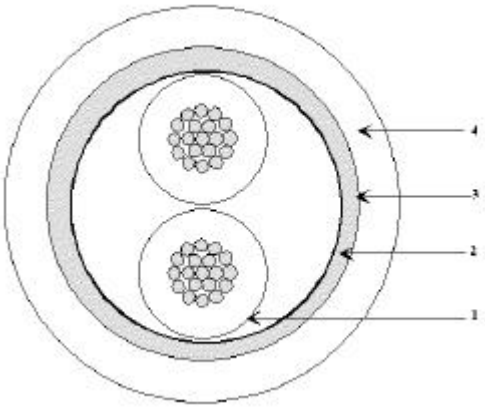
② SCREEN :
Braid Tin Plated Copper

③ TAPE

④ JACKET : Halogen free (M16) black
∅ = see the chart next page

Electrical values

- Operating voltage : 250V,



Standards

- NFF 63808, TM1 – 04,
- IEC 332 1/2/3, NFC 32070 C1/C2, VDE 0472 Teil 804, BS 4066 1/2/3, IEC 2035, IEC 2022 2/3,
- NFF 16101,
- BS 6853 Cat Ia.

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Hook - up Wires : FLAMEX range M16 jacket

Screened and Jacketed Pair Cables

Designation	Gauge AWG	Conductor Stranding n x ∅	Section (mm²)	Insulation Nominal ∅ (mm)	Cable Nominal ∅ (mm)	Average Weight (kg / km)
FLAMEX 24 16 2x 0.38 BLG	22	19 x 0.16 TC	0.38	1.20 ± 0.10	3.55 ± 0.25	20.50
FLAMEX 24 16 2x 0.60 BLG	20	19 x 0.20 TC	0.60	1.40 ± 0.10	4.00 ± 0.30	29.50
FLAMEX 24 16 2x 0.93 BLG	18	19 x 0.25 TC	0.93	1.65 ± 0.10	4.55 ± 0.30	39.00
FLAMEX 24 16 2x 1.00 BLG	18	37 x 0.18 TC	1.00	1.70 ± 0.10	4.65 ± 0.30	38.50
FLAMEX 24 16 2x 1.34 BLG	16	19 x 0.30 TC	1.34	1.90 ± 0.10	5.10 ± 0.30	51.00
FLAMEX 24 16 2x 1.50 BLG	16	37 x 0.23 TC	1.50	2.05± 0.10	5.45 ± 0.30	55.00
FLAMEX 24 16 2x 1.82 BLG	14	37 x 0.25 TC	1.82	2.25 ± 0.15	5.80 ± 0.30	65.00
FLAMEX 24 16 2x 2.50 BLG	14	37 x 0.30 TC	2.50	2.50 ± 0.15	6.80 ± 0.40	86.00
FLAMEX 24 16 2x 2.61 BLG	14	37 x 0.30 TC	2.61	2.65 ± 0.15	6.80 ± 0.40	86.00

TC : Tinned Copper

- Standard color coding for the following sections (according to NFF63808):

0.60 (AWG20)	0.93 (AWG18)	1.34 (AWG16)	1.82 (AWG14)	2.61 (AWG14)
Yellow	White	Green	Yellow	White

  - Marking (in white on a black jacket) : E-BLG 2xX.XX NFF 63-808-239-FILOTEX P2- ** ** (X.XX : cross section, ** ** production week and year) – ONLY FOR 0.6, 0.93, 1.34, 1.82 models.
  - Above mentioned versions are usually in stock,
- Other sections (0.38, 1.00, 1.50, 2.50, 2.61) are available on request without any NFF63808 marking,
- Other colors: color available for any FLAMEX 24 cross section : white, blue, yellow – green, brown, black, red, grey (no NFF63808 marking),
- Smaller sections on request.

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ELECTRONIC

Filotex®

Screened Triple Cable
Halogen free

Applications

- Hook-up multi core cable for on – board electronic equipment,
- dedicated to the rolling stock and shipboard industry.

PRODUCT REFERENCES

FLAMEX SH24 SERIES

Main data

- Halogen free conductor type FLAMEX (acc. to IEC754-1),
- Fire performance : flame and fire retardant (IEC 332-1/2/3 Cat C)
- Low smoke generation (IF < 3),
- Non toxic (ITC < 3) and non corrosive (IEC754-1/2) cable,
- Thin wall cable : lightness & weight performance,
- Operating temperature : -30°C to + 105°C,
- Bending radius : 8 x ∅ (static), 15 x ∅ (dynamic).

CONSTRUCTION

① CONDUCTOR (A) :
Stranded Tin plated Copper
Section : see next page
DIELECTRIC : Halogen free FLAMEX SH24
∅ = see next page

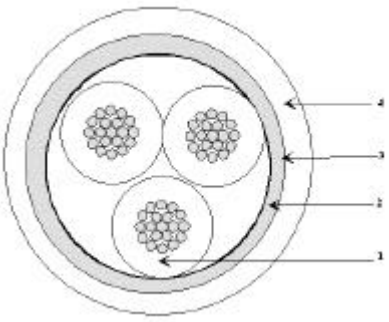
② SCREEN :
Braid Tin Plated Copper

③ TAPE

④ JACKET : Halogen free (M16) black
∅ = see the chart next page

Electrical values

- Operating voltage : 250V,



Standards

- NFF 63808, TM1 – 04,
- IEC 332 1/2/3, NFC 32070 C1/C2, VDE 0472 Teil 804, BS 4066 1/2/3, IEC 2035, IEC 2022 2/3,
- NFF 16101,
- BS 6853 Cat Ia.

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Filotex®

Hook - up Wires : FLAMEX range
M16 jacket

Screened and Jacketed Triple Cables

Designation	Gauge AWG	Conductor Stranding n x ∅	Section (mm²)	Insulation Nominal ∅ (mm)	Cable Nominal ∅ (mm)	Average Weight (kg / km)
FLAMEX 24 16 3x 0.38 BLG	22	19 x 0.16 TC	0.38	1.20 ± 0.10	3.90 ± 0.20	29.50
FLAMEX 24 16 3x 0.60 BLG	20	19 x 0.20 TC	0.60	1.40 ± 0.10	4.25 ± 0.20	40.50
FLAMEX 24 16 3x 0.93 BLG	18	19 x 0.25 TC	0.93	1.65 ± 0.10	4.70 ± 0.20	54.50
FLAMEX 24 16 3x 1.00 BLG	18	37 x 0.18 TC	1.00	1.70 ± 0.10	4.95 ± 0.20	53.00
FLAMEX 24 16 3x 1.34 BLG	16	19 x 0.30 TC	1.34	1.90 ± 0.10	5.40 ± 0.25	69.50
FLAMEX 24 16 3x 1.50 BLG	16	37 x 0.23 TC	1.50	2.05± 0.10	5.80 ± 0.25	77.00
FLAMEX 24 16 3x 1.82 BLG	14	37 x 0.25 TC	1.82	2.25 ± 0.15	6.10 ± 0.25	88.00
FLAMEX 24 16 3x 2.50 BLG	14	37 x 0.30 TC	2.50	2.50± 0.15	7.20 ± 0.40	120.00
FLAMEX 24 16 3x 2.61 BLG	14	37 x 0.30 TC	2.61	2.65 ± 0.15	7.20 ± 0.40	120.00

TC : Tinned Copper

- Standard color coding for the following sections (according to NFF63808):

0.60 (AWG20)	0.93 (AWG18)	1.34 (AWG16)	1.82 (AWG14)	2.61 (AWG14)
Yellow	White	Green	Yellow	White

  - Marking (in white on a black jacket) : E-BLG 3xX.XX NFF 63-808-239-FILOTEX P2- ** ** (X.XX : cross section, ** ** production week and year) - ONLY FOR 0.60 & 0.93 models.
  - Above mentioned versions are usually in stock,
- Other sections (0.38, 1.00, 1.34, 1.50, 1.82, 2.50, 2.61) are available on request without any NFF63808 marking,
- Other colors: color available for any FLAMEX 24 cross section : white, blue, yellow – green, brown, black, red, grey (no NFF63808 marking),
- Smaller sections on request.

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ELECTRONIC

Filotex®

Screened Quad Cable
Halogen free

Applications

- Hook-up multi core cable for on – board electronic equipment,
- dedicated to the rolling stock and shipboard industry.

PRODUCT REFERENCES

FLAMEX SH24 SERIES

Main data

- Halogen free conductor type FLAMEX (acc. to IEC754-1),
- Fire performance : flame and fire retardant (IEC 332-1/2/3 Cat C)
- Low smoke generation (IF < 3),
- Non toxic (ITC < 3) and non corrosive (IEC754-1/2) cable,
- Thin wall cable : lightness & weight performance,
- Operating temperature : -30°C to + 105°C,
- Bending radius : 8 x ∅ (static), 15 x ∅ (dynamic).

CONSTRUCTION

① CONDUCTOR (A) :
Stranded Tin plated Copper
Section : see next page
DIELECTRIC : Halogen free FLAMEX SH24
∅ = see next page

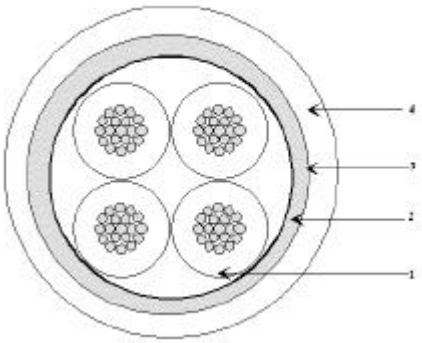
② SCREEN :
Braid Tin Plated Copper

③ TAPE

④ JACKET : Halogen free (M16) black
∅ = see the chart next page

Electrical values

- Operating voltage : 250V,



Standards

- NFF 63808, TM1 – 04,
- IEC 332 1/2/3, NFC 32070 C1/C2, VDE 0472 Teil 804, BS 4066 1/2/3, IEC 2035, IEC 2022 2/3,
- NFF 16101,
- BS 6853 Cat Ia.

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Nexans

Filotex®

Hook - up Wires : FLAMEX range
M16 jacket

Screened and Jacketed Quad Cables

Designation	Gauge AWG	Conductor Stranding n x ∅	Section (mm^2)	Insulation Nominal ∅ (mm)	Cable Nominal ∅ (mm)	Average Weight (kg / km)
FLAMEX 24 16 4x 0.38 BLG	22	19 x 0.16 TC	0.38	1.20 ± 0.10	4.25 ± 0.20	37.00
FLAMEX 24 16 4x 0.60 BLG	20	19 x 0.20 TC	0.60	1.40 ± 0.10	4.65 ± 0.20	51.00
FLAMEX 24 16 4x 0.93 BLG	18	19 x 0.25 TC	0.93	1.65 ± 0.10	5.25 ± 0.25	67.00
FLAMEX 24 16 4x 1.00 BLG	18	37 x 0.18 TC	1.00	1.70 ± 0.10	5.40 ± 0.25	67.50
FLAMEX 24 16 4x 1.34 BLG	16	19 x 0.30 TC	1.34	1.90 ± 0.10	5.95 ± 0.25	92.00
FLAMEX 24 16 4x 1.50 BLG	16	37 x 0.23 TC	1.50	2.05± 0.10	6.35 ± 0.25	98.50
FLAMEX 24 16 4x 1.82 BLG	14	37 x 0.25 TC	1.82	2.25 ± 0.15	6.70 ± 0.25	113.00
FLAMEX 24 16 4x 2.50 BLG	14	37 x 0.30 TC	2.50	2.50± 0.15	8.15 ± 0.40	161.00
FLAMEX 24 16 4x 2.61 BLG	14	37 x 0.30 TC	2.61	2.65 ± 0.15	8.15 ± 0.40	161.00

TC : Tinned Copper

- Standard color coding for the following sections (according to NFF63808):

0.60 (AWG20)	0.93 (AWG18)	1.34 (AWG16)	1.82 (AWG14)	2.61 (AWG14)
Yellow	White	Green	Yellow	White

  - Marking (in white on a black jacket) : E-BLG 4xX.XX NFF 63-808-239-FILOTEX P2- ** ** (X.XX : cross section, ** ** production week and year) - ONLY FOR 0.60 & 1.34 models.
  - Above mentioned versions are usually in stock,
- Other sections (0.38, 0.93, 1.00, 1.50, 1.82, 2.50, 2.61) are available on request without any NFF63808 marking,
- Other colors: color available for any FLAMEX 24 cross section : white, blue, yellow – green, brown, black, red, grey (no NFF63808 marking),
- Smaller sections on request.

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Nexans

ELECTRONIC

Filotex®

Coaxial Cables : FLAMEX RG

PRODUCTS IN THE RANGE

FLAMEX RG

CONSTRUCTION

① CONDUCTOR
Stranded bare, tinned or silvered copper

② DIELECTRIC
plain PE

③ TAPE (option)
fire barrier

④ SCREEN
single or double braid bare, tinned or silvered copper

⑤ TAPE (option)
fire barrier

⑥ JACKET black or green halogen free

Applications :

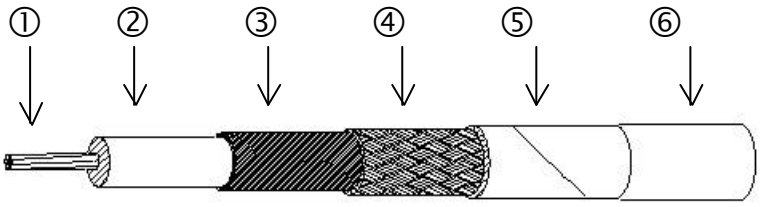
- High Frequency Data transmission (communication equipment, radar, instrumentation equipment),
- Video signal transmission.

Fire Performance :

- Flame and Fire retardant (IEC 332 – 3 Cat C),
- Halogen free cable (IEC 754 – 1),
- Non corrosive and non toxic cable (IEC 754 – 2),
- Low smoke emission and opacity (IEC 1034).

Main data :

- Electrical and mechanical data in accordance with the MIL C17 standard,
- High electromagnetic protection : single or double braids,
- Operating temperature : -30°C to +80°C,
- High chemical resistance (acids, alkalis, oil, …).



Standards :

- Approved Bureau Veritas,
- MIL C 17,
- IEC332 – 3 Cat C,
- IEC 754 - 1 & - 2,
- IEC 1034.

Marking :

- FILOTEX P FLAMEX “cable type”

Connectors :

- Compatible with standard connectors : SMA, SMB, TNC, BNC, N, C, SC, HN, LC

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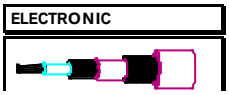

Filotex®

Coaxial Cables : FLAMEX RG properties

Mechanical properties	Methods & Norms	FLAMEX RG
Operating temperature	IEC 261-1	- 30°C to + 80°C

Fire hazard properties	Methods & Norms	FLAMEX RG
Flammability	IEC332-1/2/3, VDE 0472 Teil 804 Var. A/B/C, BS 4066 1/2/3, IEC 2035, IEC 2022 2/3	Pass
Smoke index	NFF 16101	Pass, IF<3 acc. to NFF16101
Smoke density	VDE0472 Teil816, IEC1034, IEC 2037-3, BS 6724	Pass
Toxicity index	NFF 16101, IEC 2037-3	Pass, ITC < 3
Halogen content	IEC 754-1, VDE 0472 Teil 815, IEC 2037-1	Pass, < 0.2%
Acidity (pH > 3,5)	IEC 754-2, VDE 0472 Teil 813	Pass, pH > 4
Conductivity (<100µS/cm)	IEC 754-2, VDE 0472 Teil 813	Pass, < 100 µS/cm

Chemical properties	Methods & Norms	FLAMEX RG
Acids	24 hours at 60°C	Pass
Bases	24 hours at 60°C	Pass
Oil ASTM2	24 hours at 60°C	Pass

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Filotex®

Coaxial Cables : FLAMEX RG

Coaxial Cable 50 Ω (MIL C 17)

Designation	Conductor		Dielectric	Braid (2)		Cable		Operating	Jacket
	Stranding	∅ (mm)	∅ (mm)	1 (mm)	2 (mm)	Ext ∅ (mm)	Weight (kg/km)	voltage (V ac)	Color
FLAMEX RG174 AU	7x0.16 BCw	0.48	1.52 ± 0.08	0.10 TC	-	2.79 ± 0.13	12.5	1100	Black (1)
FLAMEX RG58 CU	19x0.18 TC	0.90	2.95 ± 0.10	0.13 TC	-	4.95 ± 0.10	41	1400	Black (1)
FLAMEX RG223 U	1x0.89 SC	0.89	2.95 ± 0.10	0.13 SC	0.13 SC	5.38 ± 0.10	58	1400	Black (1)
FLAMEX RG212 U	1x1.41 SC	1.41	4.70 ± 0.10	0.16 SC	0.16 SC	8.43 ± 0.10	126	2200	Black (1)
FLAMEX RG213 U	7x0.75 BC	2.25	7.24 ± 0.18	0.18 BC	-	10.3 ± 0.18	165	3700	Black (1)
FLAMEX RG214 U	7x0.75 SC	2.25	7.24 ± 0.18	0.16 SC	0.16 SC	10.8 ± 0.18	198	3700	Black (1)
FLAMEX RG217 U	1x2.69 BC	2.69	9.40 ± 0.25	0.18 BC	0.18 BC	13.8 ± 0.25	313	5200	Black (1)
FLAMEX RG218 U	1x4.95 BC	4.95	17.3 ± 0.25	0.25 BC	-	22.1 ± 0.25	715	8000	Black (1)
FLAMEX RG177 U	1x4.95 BC	4.95	17.3 ± 0.25	0.16 SC	0.16 SC	22.7 ± 0.38	760	8000	Black (1)

Capacity : < 106 pF / m Propagation velocity : 65.9%

Coaxial Cable 75 Ω (MIL C 17)

Designation	Conductor		Dielectric	Braid (2)		Cable		Operating	Jacket
	Stranding	∅ (mm)	∅ (mm)	1 (mm)	2 (mm)	Ext ∅ (mm)	Weight (kg/km)	voltage (V ac)	Color
FLAMEX RG59 BU	1x0.57 BCw	0.57	3.71 ± 0.10	0.16 BC	-	6.15 ± 0.10	58	1700	Black (1)
FLAMEX RG 6 AU	1x0.72 BCw	0.72	4.70 ± 0.10	0.16 SC	0.16 BC	8.43 ± 0.10	116	2000	Black (1)
FLAMEX RG 11 AU	7x 0.40 TC	1.21	7.24 ± 0.18	0.18 BC	-	10.3 ± 0.18	146	3700	Black (1)
FLAMEX RG216 U	7x 0.40 TC	1.21	7.24 ± 0.18	0.16 BC	0.16 BC	10.8 ± 0.18	176	3700	Black (1)
FLAMEX RG164 U	1x 2.65 BC	2.65	17.3 ± 0.25	0.25 BC	-	22.1 ± 0.25	606	7500	Black (1)

Capacity : < 72.2 pF / m Propagation velocity : 65.9 %

(1) white marking "FILOTEX P FLAMEX RG XXX"
(2) TC : Tinned Copper, BC ; Bare Copper, Sc : Silvered Copper, BCw : Bare Copper weld

Multi coaxial Cable according to the customer specification

- multi coaxial cable including different RG versions,
- waterproof / armored cable as option.

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Nexans

ELECTRONIC

Filotex®

Bus Cables : Ethernet and Fieldbus

ETHERNET

- Data transmission for on - board computer networks, type Ethernet (IEEE 802.3, Thin Ethernet) up to 100 Mbps,
- Coaxial and multipair cables.

FIELDBUS : WorldFIP, PROFIBUS (Standard : EN 50170)

- Data transmission for on – board control and instrumentation networks,
- Multipair cables.

Fire Performance :

- Flame and Fire retardant (IEC 332 – 3 Cat C),
- Halogen free cable (IEC 754 – 1),
- Non corrosive and non toxic cable (IEC 754 – 2),
- Low smoke emission and opacity (IEC 1034).

Main data :

- High Electromagnetic protection : single or double braids,
- Operating temperature : -30°C to +80°C,
- High chemical resistance (acids, alkalis, oil, …).

PRODUCT REFERENCES

FLAMEX SH24 SERIES

CONSTRUCTION

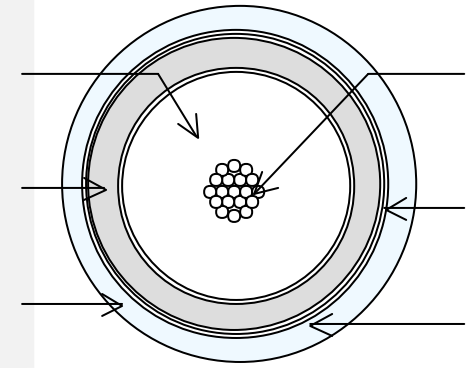
② DIELECTRIC : Foamed PE

④ SCREEN : BRAID
Tinned Copper

⑥ JACKET : halogen free
FLAMEX (black or yellow)

② TAPE : Aluminum
Polyester Aluminum

④ JACKET : halogen free
FLAMEX (black)

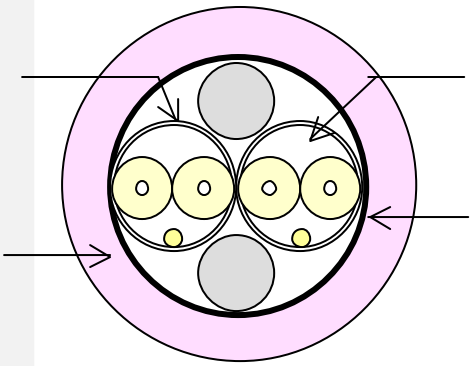


COAXIALCABLES :

CONDUCTOR ①
Stranded Tinned Copper

TAPE ③
Aluminum Polyester Aluminum

1/2 TAPES ⑤
Aluminum Polyester Aluminum



SCREENED MULTIPAIRCABLES :

PAIR ①
Stranded / Solid Tin Copper
Insulation : PP or PE
Drain wire (option)

SCREEN ③
Braid Tinned Copper

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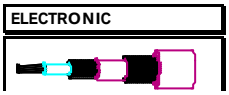

Filotex®

Bus Cables : Ethernet and Fieldbus

ETHERNET Cables

Designation	Cable description	Imp. (W)	Conductor Stranding	AWG	Insulation	Braid	Cable Ext. ∅ (mm)
ET 269 487	Coaxial cable	50 ± 2	19x0.19 TC	20	f. Polyolefine	TC	5.20 ± 0.20
ET 298 931	Coaxial cable, double screen	50 ± 2	19x0.19 TC	20	f. Polyolefine	TC	7.50 ± 0.25
ET 388 945	Armoured coaxial cable, double screen (TC and galvanized steel)	50 ± 2	1x2,17 TC	12	f. Polyolefine	TC / GS	13.2 ± 0.30
ET 276 659	Screened Multipair Cable, 4 pairs + 1 drain wire	78 ± 5	7x0,16 TC	26	Polyolefine	TC	7.00 ± 0.25
ET 267 724	Screened Multipair Cable, 6 pairs + 1 drain wire	78 ± 5	7x0,25 TC	22	Polyolefine	TC	13.00 ± 0.30
ET 267 722	Screened Multipair Cable, 6 pairs + 1 drain wire	78 ± 5	7x0,20 TC	24	Polyolefine	TC	10.00 ± 0.30

Fieldbus Cables (EN 50170 : WorldFIP, PROFIBUS)

Designation	Cable description	Imp. (W)	Conductor Stranding	AWG	Insulation	Braid (mm)	Cable Ext. ∅ (mm)
ET 296 356	Pair Cable, 1 pair + 1 drain wire	150	1x0,65 RC	22	f. Polyolefine	-	8.20 ± 0.20
ET 298 719	Screened Pair Cable + 1 drain wire	150	1x0,65 RC	22	f. Polyolefine	0.20 TC	9.80 ± 0.25
ET 296 421	Multipair Cable, 2 Pairs + 2 drain wires,	150	1x0,65 RC	22	f. Polyolefine	-	13.00 ± 0.30
ET 296 328	Screened Multipair Cable, 2 Pairs + 2 drain wires,	150	1x0,65 RC	22	f. Polyolefine	0.20 TC	15.00 ± 0.40
ET 298 720	Screened Multipair Cable, 1 Pair, 2 power supply cores (TC, AWG16)	150	1x0,65 RC	22	f. Polyolefine	0.20 TC	15.00 ± 0.40
ET 298 990	Power Supply Cable, 2 conductors	-	30x0,25 TC	16	Halogen free	-	5.40 ± 0.30

For more technical data : please contact us

TC : Tinned Copper, RC : Red Copper, GS : Galvanized Steel, f. Polyolefine : foamed Polyolefine

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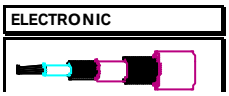

Filotex®

Bus Cables : Ethernet and Fieldbus

ETHERNET Cables

Designation	Cable description	Conductor	Jacket	Marking
ET 269 487	Coaxial cable	-	black	white : FILOTEX P EDE 269487
ET 298 931	Coaxial cable, double screen	-	black	white : FILOTEX P EDE 298931
ET 388 945	Armoured coaxial cable, double screen (TC and galvanized steel)	-	yellow	Black ring each 2.5 m
ET 276 659	Screened Multipair Cable, 4 pairs + 1 drain wire	R + B, G + B, Y + O, W + Gy	black	white : FILOTEX P EDE 276659
ET 267 724	Screened Multipair Cable, 6 pairs + 1 drain wire	W + B, W + R, W + Y, W + G, W + B, W + Gy	black	-
ET 267 722	Screened Multipair Cable, 6 pairs + 1 drain wire	W + B, W + R, W + Y, W + G, W + B, W + Gy	black	-

W : white, R : Red, B : Blue, Br : Brown, Y : Yellow, G : Green, Gy ; Grey, B : Black, O : Orange

Fieldbus Cables (EN 50170 : WorldFIP, PROFIBUS)

Designation	Cable description	Conductor	Jacket	Marking
ET 296 356	Pair Cable, 1 pair + 1 drain wire	Orange + Black	Black	white : FILOTEX France EDE 296 356 MM/YY (production date)
ET 298 719	Screened Pair Cable + 1 drain wire	Orange + Black	Black	White : FILOTEX France EDE 298 719 MM/YY (production date)
ET 296 421	Multipair Cable, 2 Pairs + 2 drain wires,	Orange + Black, Red + Green	Black	White : FILOTEX France EDE 296 421 MM/YY (production date)
ET 296 328	Screened Multipair Cable, 2 Pairs + 2 drain wires,	Orange + Black, Red + Green	Black	White : FILOTEX France EDE 296 328 MM/YY (production date)
ET 298 720	Screened Multipair Cable, 1 Pair, 2 power supply cores (TC, AWG16)	Orange + Black	Black	White : FILOTEX France EDE 298 720 MM/YY (production date)
ET 298 990	Power Supply Cable, 2 conductors	-	Black	

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Filotex®

Special Cables

Applications

- Data Transmission
  - ✓ Low Frequency
  - ✓ High Frequency
- for Communication between On – Board Electronic Equipment,
- for On – Board Video – Surveillance System.

Examples of Products

- Multipair Cables
  - ✓ 10 pairs (ET 296 348)
  - ✓ 6 pairs (ET 296 349)
- Jumper Cables for Railways (ET 2PB503/504/505/698)
- Multicore Cables for Shipboard (ET 297148 / 297150)

Main Characteristics

- Halogen free cable,
- Flame and fire retardant (IEC 332 – 1 / 2 / 3 Cat C),
- Thin wall cable : place and weight saving,
- Excellent chemical resistance,
- Operating Voltage : 250V,
- Operating Temperature : +80°C,
- Bureau Veritas approved
- Rolling stock approval : TM 1 –04 (Channel Tunnel), NFF 63808 (French Railways and Subway Companies)

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ELECTRONIC

Filotex®

Multipair Cable
10 pairs, AWG22
Halogen free

Applications

- Data transmission cable for on – board electronic equipment,
- dedicated to shipboard industry.

PRODUCT REFERENCES

FILOTEX Ref : **ET 296 348**

Main data

- Halogen free cable
- Fire performance : flame and fire retardant (IEC 332 - 1 / 2)
- Thin wall cable : lightness & weight performance,
- Excellent chemical resistance (acids, oil, hydraulic fluids),
- Operating temperature : -20°C to + 80°C,
- Average cable weight : 175 kg / km,

Electrical values

- Operating voltage : 250V,

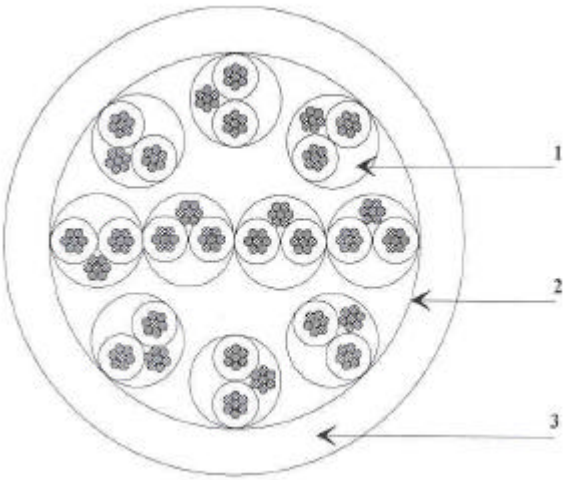
CONSTRUCTION

① 10 PAIRS :
7 x 0,25 mm Tinned Copper
Section 0.34 mm^2 / AWG 22
Insulation : Polyolefin
∅ = 1.26 mm ± 0.10mm
Drain wire : 7x0.25 Tinned Copper
Tape : Polyester Aluminum

② TAPE : Polyester

③ JACKET : Halogen free, black

∅ = 10.60 mm ± 0.30mm



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ELECTRONIC

Filotex®

Multipair Cable
6 pairs, AWG22
Halogen free

Applications

- Data transmission cable for on – board electronic equipment,
- dedicated to shipboard industry.

PRODUCT REFERENCES

FILOTEX Ref : **ET 296 349**

Main data

- Halogen free cable
- Fire performance : flame and fire retardant (IEC 332 - 1 / 2)
- Thin wall cable : lightness & weight performance,
- Excellent chemical resistance (acids, oil, hydraulic fluids),
- Operating temperature : -20°C to + 80°C,
- Average cable weight : 130 kg / km,

CONSTRUCTION

① FILLER

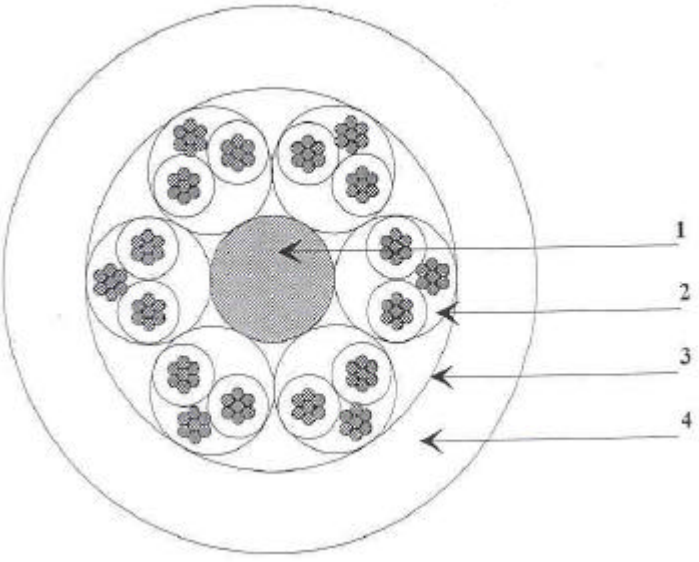
② 6 PAIRS :
7 x 0,25 mm Tinned Copper
Section 0.34 mm² / AWG 22
Insulation : Polyolefin
∅ = 1.26 mm ± 0.10mm
Drain wire : 7x0.25 Tinned Copper
Tape : Polyester Aluminum

③ TAPE : Polyester

④ JACKET : Halogen free, black

Electrical values

- Operating voltage : 250V,



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ELECTRONIC

Filotex®

Jumper Cable
High flexible
Halogen free

Applications

- Data transmission cable between cars (jumper),
- dedicated to railways industry,
- High flexible cable.

PRODUCT REFERENCES

FILOTEX Ref: **ET 2PB 503**

Main data

- Jumper cable,
- Insulation and internal jacket material acc. to NFF 63808,
- External jacket material acc. to NFF 63295,
- Fire performance : flame and fire retardant (NFC 32070 C1/C2),
- Thin wall cable : lightness & weight performance,
- Excellent chemical resistance (acids, oil, hydraulic fluids),
- Operating temperature : -30°C to + 105°C,
- Low toxicity index.

CONSTRUCTION

① FILLERS

② 17 CORES :
Class 6 Tinned Copper (1.34mm²)
Insulation : Halogen free
∅ = 2.00 mm ± 0.10mm

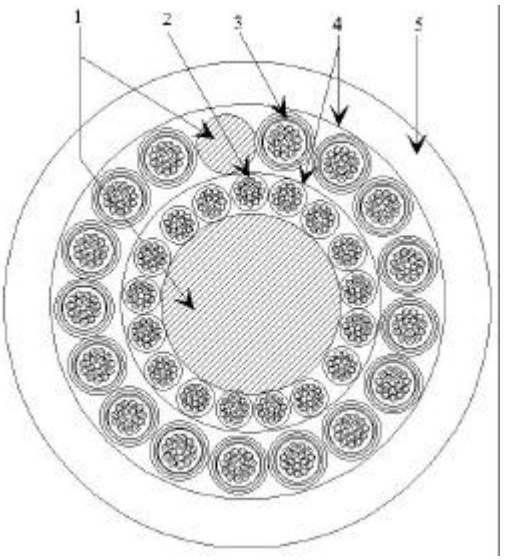
③ 16 CORES
screened & jacketed:
Class 6 Tinned Copper (1.34mm²)
Insulation : Halogen free
∅ = 2.00 mm ± 0.10mm
Tin p. copper braid
Polyester tape
Halogen free jacket :
∅ = 3.00 mm ± 0.20mm

④ TAPES

⑤ JACKET : Rubber
∅ = 26.00 mm ± 0.50mm

Electrical values

- On request,



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ELECTRONIC

Filotex®

Jumper Cable
High flexible
Halogen free

PRODUCT REFERENCES

FILOTEX Ref: **ET 2PB 504**

CONSTRUCTION

① FILLERS

CORE (A)
Class 6 Tinned Copper
(0.93 mm²)
Insulation : Halogen free
∅ = 1.70 mm ± 0.10mm

② 9 PAIRS :
2 Cores (A)
Polyester tape
Tin p. copper braid
Polyester tape
Jacket : Halogen free
∅ = 4.90 mm ± 0.30mm

③ 10 TRIPLES
3 Cores (A)
Polyester tape
Tin p. copper braid
Polyester tape
Halogen free jacket :
∅ = 5.30 mm ± 0.30mm

④ TAPES

⑤ JACKET : Rubber
∅ = 32.00 mm ± 1.00mm

Applications

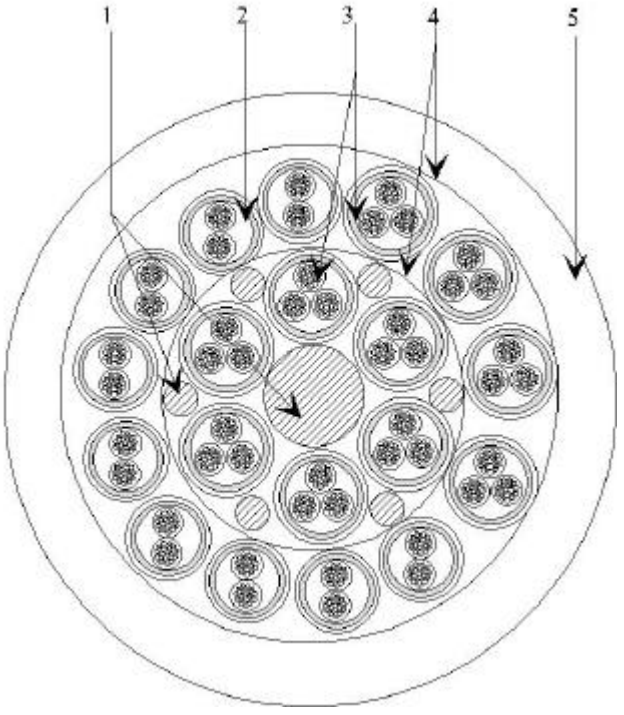
- Data transmission cable between cars (jumper),
- dedicated to railways industry,
- High flexible cable.

Main data

- Jumper cable,
- Insulation and internal jacket material acc. to NFF 63808,
- External jacket material acc. to NFF 63295,
- Fire performance : flame and fire retardant (NFC 32070 C1/C2),
- Thin wall cable : lightness & weight performance,
- Excellent chemical resistance (acids, oil, hydraulic fluids),
- Operating temperature : -30°C to + 105°C,
- Low toxicity index.

Electrical values

- On request,



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ELECTRONIC

Filotex®

Jumper Cable
High flexible
Halogen free

PRODUCT REFERENCES

FILOTEX Ref: **ET 2PB 505**

Applications

- Data transmission cable between cars (jumper),
- dedicated to railways industry,
- High flexible cable.

Main data

- Jumper cable,
- Insulation and internal jacket material acc. to NFF 63808,
- External jacket material acc. to NFF 63295,
- Fire performance : flame and fire retardant (NFC 32070 C1/C2),
- Thin wall cable : lightness & weight performance,
- Excellent chemical resistance (acids, oil, hydraulic fluids),
- Operating temperature : -30°C to + 105°C,
- Low toxicity index.

CONSTRUCTION

① FILLERS

② 6 PAIRS :
2 Cores
Class 6 Tinned Copper (0.93mm²)
Insulation : Halogen free
∅ = 1.70 mm ± 0.10mm
2 Polyester tape/Tin Copper braid
Jacket : Halogen free
∅ = 4.90 mm ± 0.30mm

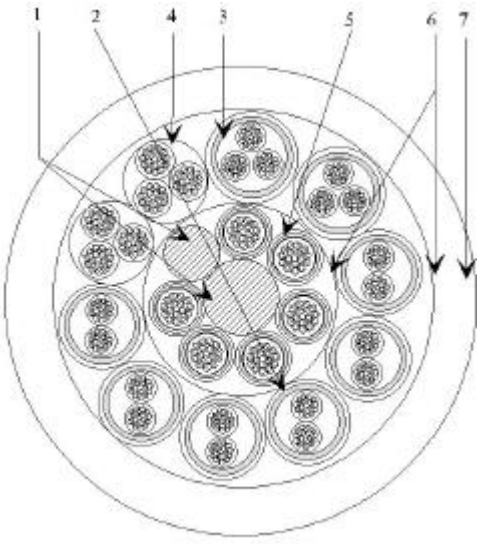
③ 2 TRIPLES
3 Cores
Class 6 Tinned Copper (0.93mm²)
Insulation : Halogen free
∅ = 1.70 mm ± 0.10mm
2 Polyester tape/Tin Copper braid
Jacket : Halogen free
∅ = 5.30 mm ± 0.30mm

④ 2 TRIPLES
3 Cores
Class 6 Tinned Copper (1.34mm²)
Insulation : Halogen free

⑤ 6 CORES screened and jacketed
Class 6 Tinned Copper (1.34mm²)
Insulation : Halogen free, ∅ = 2.00 mm ± 0.10mm
Tin p. copper braid / Polyester Tape
Halogen free jacket ∅ = 3.00 mm ± 0.20mm

⑥ TAPES

⑦ JACKET : Rubber, ∅ = 26.50 mm ± 0.70mm



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ELECTRONIC

Filotex®

Jumper Cable
High flexible
Halogen free

PRODUCT REFERENCES

FILOTEX Ref: **ET 2PB 698**

Applications

- Data transmission cable between cars (jumper),
- dedicated to railways industry,
- High flexible cable.

Main data

- Jumper cable,
- Insulation and internal jacket material acc. to NFF 63808,
- External jacket material acc. to NFF 63295,
- Fire performance : flame and fire retardant (NFC 32070 C1/C2),
- Thin wall cable : lightness & weight performance,
- Excellent chemical resistance (acids, oil, hydraulic fluids),
- Operating temperature : -30°C to + 105°C,
- Low toxicity index.

CONSTRUCTION

① FILLERS

② 15 PAIRS :
2 Cores
Class 6 Tinned Copper (0.93mm²)
Insulation : Halogen free
∅ = 1.70 mm ± 0.10mm
2 Polyester tape/Tin Copper braid
Jacket : Halogen free
∅ = 4.90 mm ± 0.30mm

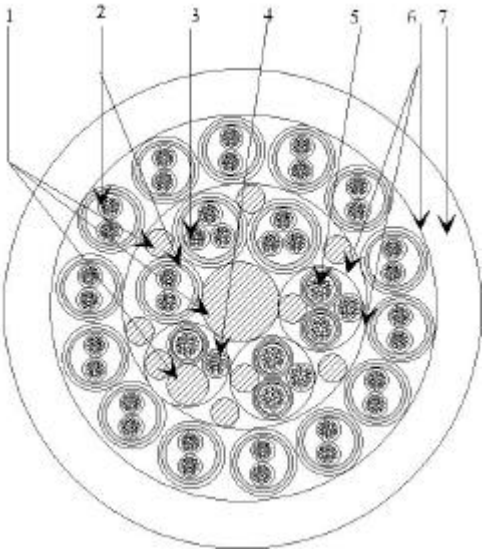
③ 2 TRIPLES
3 Cores
Class 6 Tinned Copper (0.93mm²)
Insulation : Halogen free
∅ = 1.70 mm ± 0.10mm
Polyester tape / Tin Copper braid / Polyester tape
Jacket : Halogen free
∅ = 5.30 mm ± 0.30mm

④ 3 CORES
Class 6 Tinned Copper (1.34mm²)

⑤ 5 CORES screened and jacketed
Class 6 Tinned Copper (1.34mm²)
Insulation : Halogen free, ∅ = 2.00 mm ± 0.10mm
Tin p. copper braid / Polyester Tape
Halogen free jacket ∅ = 3.00 mm ± 0.20mm

⑥ TAPES

⑦ JACKET : Rubber, ∅ = 34.50 mm ± 0.80mm



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ELECTRONIC

Filotex®

Multicore Cable Halogen free 5X2.50 G

PRODUCT REFERENCES

FILOTEX Ref : **ET 297 150**

CONSTRUCTION

① 5 CORES :
50x0.25 mm or 37x0.30 mm
Tinned Copper (2.50mm²)
Insulation : Halogen free
∅ = 2.45 mm

② TAPE : Polyester separator

③ JACKET : halogen free
black

∅ = 8.00 mm ± 0.30mm

Applications

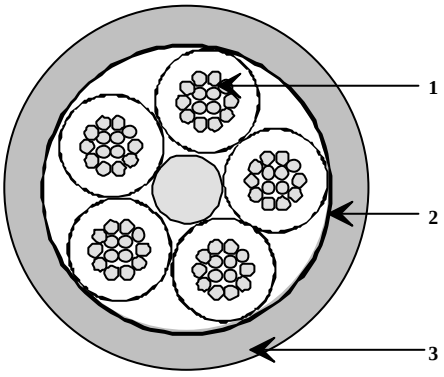
- Data transmission cable,
- dedicated to the shipboard industry,
- Thin wall cable.

Main data

- Multi core unscreened cable,
- Flame retardant (IEC 332/1),
- Thin wall cable : lightness & weight performance,
- Operating temperature : -30°C to + 105°C,
- Low toxicity index.

Electrical data

- Operating voltage : 250V



Standard :

- Bureau Veritas and Lloyd's Register (approved)

Cores color :

- Black, red, yellow /green /, blue and braun

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ELECTRONIC

Filotex®

Multicore Cable
Halogen free
AWG 16

PRODUCT REFERENCES

FILOTEX Ref: **ET 297 148**

CONSTRUCTION

① 2 CORES :
30 x 0.25 mm Tinned Copper
(1.50 mm² / AWG 16)
Insulation : Halogen free
∅ = 2.00 mm

② TAPE : Polyester separator

③ JACKET : halogen free
black

∅ = 5.00 mm ± 0.30mm

Applications

- Data transmission cable,
- dedicated to the shipboard industry,
- Thin wall cable.

Main data

- Multi core unscreened cable,
- Insulation and internal jacket material acc. to NFF 63808,
- External jacket material acc. to NFF 63295,
- Fire performance : flame and fire retardant (NFC 32070 C1/C2),
- Thin wall cable : lightness & weight performance,
- Excellent chemical resistance (acids, oil, hydraulic fluids),
- Operating temperature : -30°C to + 105°C,
- Low toxicity index.

Electrical data

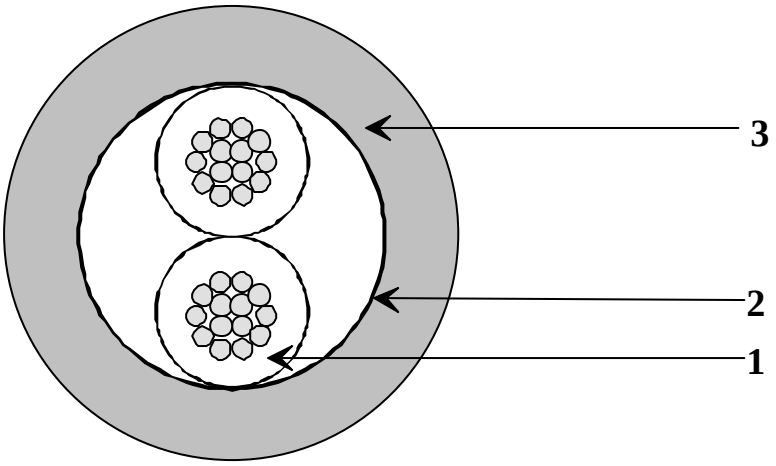
- Operating voltage : 250V
- Linear resistance : 13,7 Ω / km max.

Standard :

- Bureau Veritas (BV approved)

Cores color :

- Black and red



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