

# CABLES FOR AUTOMOTIVE MARKET

## Sensor and multimedia cables

### Catalogue





## Introduction

Filotex® Electronic Products have a wide experience in research and development of Special and Customised cables for the automotive market.

Our range of cables covers two main type of applications which require high efficiency and experience: sensor cables for harsh environment and multimedia market.



The excellent mechanical and chemical characteristics of our cables give high resistance in harsh environmental operating conditions.

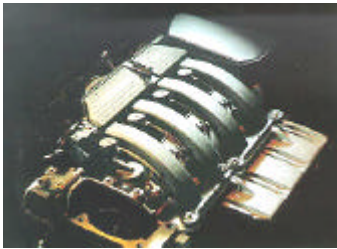
The recommended operating temperatures cover - 90°C to +260°C with a maximum voltage of up to 750 volts.

Our cables are available in many different styles including hook-up wires, coaxial cables, multicore cables, multi-pair cables and composite cables including optical elements.

Our research and development department will address any specific need from our customers regarding the chemical, mechanical and electrical properties of the cables.



## Cables for sensors



Single and multicore cables for sensors in harsh environment.

**Applications:** Oxygen Sensor, Oil tank sensor, Anti Break System, Break Altering Indicator, Automatic Gear Box Sensor, Temperature Sensor.

### ❑ Technology

Tin / Silver plated Copper or aluminium conductor  
Polyimide wrapped wire also available  
AWG 32 to 14  
PTFE / PFA / ETFE / FEP / polyimide extruded insulation

### ❑ Advantages

High temperature cable (up 260°C)  
High mechanical resistance (abrasion, cutting through)  
High flexibility  
Excellent chemical behaviour (engine oil, break oil, gear box oil, petrol...)  
Weight saving : light conductor materials  
Excellent electromagnetic interference protection

## Antenna cables



Coaxial cables for multimedia in-car equipment  
**Applications:** Navigation system (GPS), Car radio, Mobile phone and Remote Control Antenna

### ❑ Technology

RG 174, RG 178, RG 316, RG 179 types  
High speed data bus cable  
Copper or optical fiber medium (IEEE394)  
Single or double braid  
PE / FEP / PTFE insulation

### ❑ Advantages

High temperature cable (up to 105 / 110°C)  
High mechanical resistance jacket  
Easy connecting  
Small and flexible cables  
Conductor cross sections compatible with existing standard connectors



## Summary

### Part 1

#### Cables for sensors

*ABS*

*Break altering indicator*

*Gear box sensor*

*Oil sensor (level, fluidity)*

*Gas detection/oxygen sensor*

*Temperature sensor*

**Page 5**

### Part 2

#### Antenna cable

*CD player connection*

*Antenna for remote control key*

*Remote control system antenna*

*Car antenna for radio, mobile phone and GPS*

**Page 21**

# Part 1

---

## Cables for sensors



# Filotex<sup>®</sup>

## Single Core Cable High Temperature 150°C

### PRODUCT REFERENCES

FILOTEX Ref : **ET 277 327**

### CONSTRUCTION

- ① CONDUCTOR :  
Tin Plated Copper  
19 x 0.224 mm  
(0,75 mm<sup>2</sup> AWG20)
- ② INSULATION : ETFE  
Ø 1.72 ± 0.07 mm

### Applications

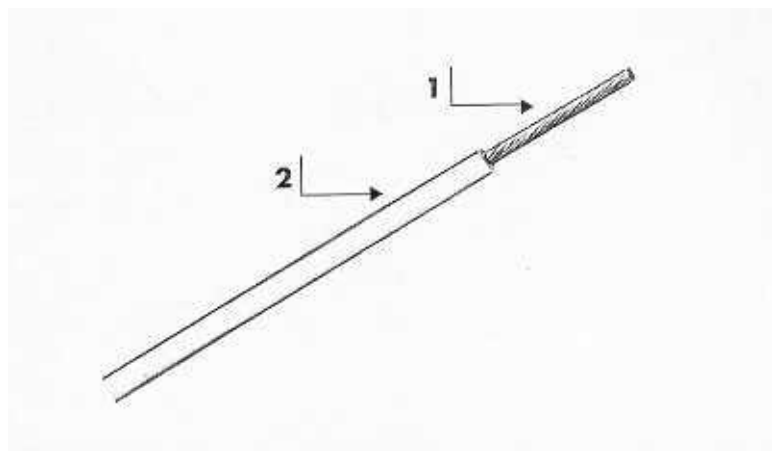
- ❑ Sensor Cable for Automotive Application : ABS (Anti Break System) sensor

### Main data

- ❑ High temperature cable,
- ❑ Operation Temperature : -55°C to + 150°C,
- ❑ Very Good Chemical Resistance (acids, bases, oil),
- ❑ Flame and Fire retardant (IEC332 – 1/2/3 & NFC 32070 C2 / C1),
- ❑ Average Weight : 10,1 kg / km

### Electrical data

- ❑ Operating voltage : 500 V





# Filotex<sup>®</sup>

## Multicore Cable High Temperature 150°C

### PRODUCT REFERENCES

FILOTEX Ref : **ET 289 379**

### Applications

- ❑ Sensor Cable for Automotive Application : ABS (Anti Break System) sensor

### Main data

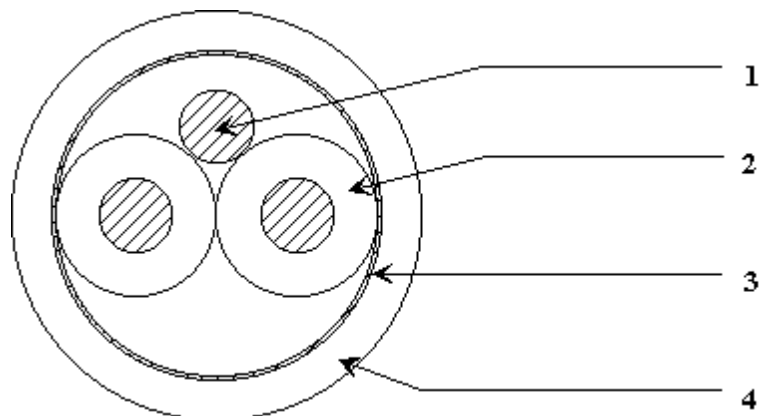
- ❑ High Temperature cable
- ❑ Operation Temperature : + 150°C,

### CONSTRUCTION

- ① DRAIN WIRE :  
28 x 0.15 Tinned Copper  
AWG 20
- ② 2 CONDUCTORS :  
28x0.15mmTin p. Copper  
Insulation : TPE  
Ø = 2.00 mm
- ③ TAPE : Polyester Aluminum
- ④ JACKET : TPE  
Ø = 5.10 mm ± 0.30 mm

### Electrical data

- ❑ Operating voltage : 250 V,
- ❑ Conductor resistance : < 40.71 Ω / km





# Filotex<sup>®</sup>

## Single Core Cable High Temperature 200°C

### PRODUCT REFERENCES

FILOTEX Ref: **ET 2PB 795**

### CONSTRUCTION

- ① CONDUCTOR :  
Silver Plated Copper  
Section : 0.15mm<sup>2</sup> / AWG26  
Ø : 0.45 mm
- ② INSULATION :  
PFA  
  
Ø = 0.83 ± 0.02 mm

### Applications

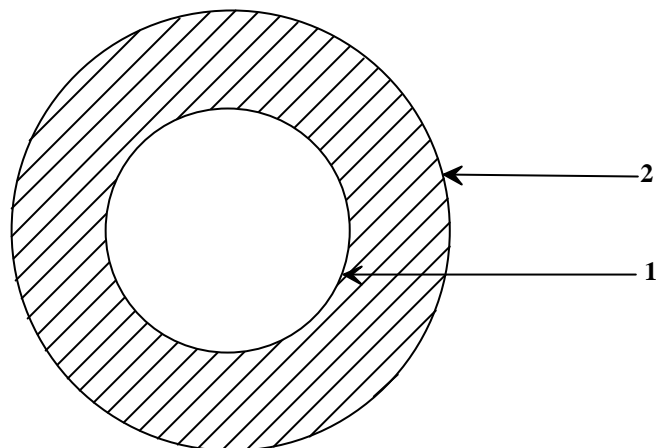
- ❑ Hook-up Wire for Automotive Application : Break Altering indicator connection.

### Main data

- ❑ Operating Temperature : -50°C to + 200°C,
- ❑ Good Chemical Resistance,
- ❑ The PFA wire could get an additional jacket (PTFE or Polyimide tape) for chemical resistance improvement.

### Electrical data

- ❑ Operating voltage : 300 V,
- ❑ Test voltage : 1000 V
- ❑ Linear resistance : 250 Ohms / km



ELECTRONIC



Filotex<sup>®</sup>

## Single Core Cable High Temperature PTFE Insulated Wire 260°C

Passing on or copying of the document, use or communicate of its content is not permitted without prior written authorization. Information subject to change without notice.

### PRODUCT REFERENCES

FILOTEX Ref : **ET 132500**

### CONSTRUCTION

① CONDUCTOR :  
Stranded conductor :  
19 x 0.127 mm Nickel plated  
copper (AWG 24)

② INSULATION  
Extruded PTFE

OD = 0.96 ± 0.05 mm

### Applications

- ❑ Hook-up wire for automotive application : break altering indicator connection.

### Electrical Characteristics

- ❑ Voltage Rating : 250 Volts RMS
- ❑ Low Operating Temperature : -55°C
- ❑ High Operating Temperature : 260°C
- ❑ Good Chemical Resistance
- ❑ Non Flammable
- ❑ Nominal Weight : 3.06 g/m

### Identification

- ❑ Color of wire : Black

**Specification** : Study 132500

FILOTEX<sup>®</sup> Study 132500



↑  
1

↑  
2

140 – 146 rue E. Delacroix / BP 1  
F – 91211 Draveil cedex – FRANCE  
Tel : + 33 1 69 83 78 00  
Fax : + 33 1 69 42 05 70

 nexans

Issue 2 - March 2002 - 9 -



# Filotex<sup>®</sup>

## Single Core Cable High Temperature 260°C

### PRODUCT REFERENCES

FILOTEX Ref : **ET 124 564**

### CONSTRUCTION

- ① CONDUCTOR :  
Nickel Plated Copper  
19 x 0.225 mm (AWG 20)  
Ø 1.10 mm
- ② INSULATION :  
Extruded PTFE  
Ø 1.85 ± 0.05 mm

### Applications

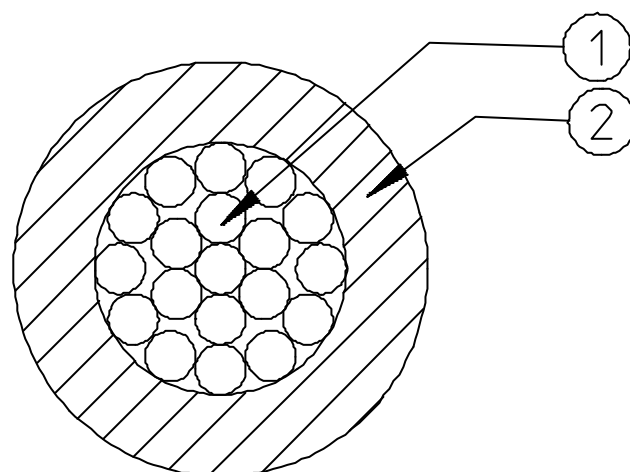
- ❑ Hook-up Wire for Automotive Application : Gear Box

### Main data

- ❑ Operation Temperature : -55°C to + 260°C,
- ❑ Very Good Chemical Resistance,
- ❑ Fire Retardant ( Norm NFC 32070/C1),
- ❑ Average Weight : 10.5 g/m.

### Electrical data

- ❑ Operating voltage : 600 V





# Filotex<sup>®</sup>

## Low Voltage Cable ETFE Jacket 150°C

### PRODUCT REFERENCES

FILOTEX Ref: **ET 2PA 341**

### Applications

- ❑ Sensor cable for Automotive applications : Oil analysis (level, fluidity, ...)

### Main data

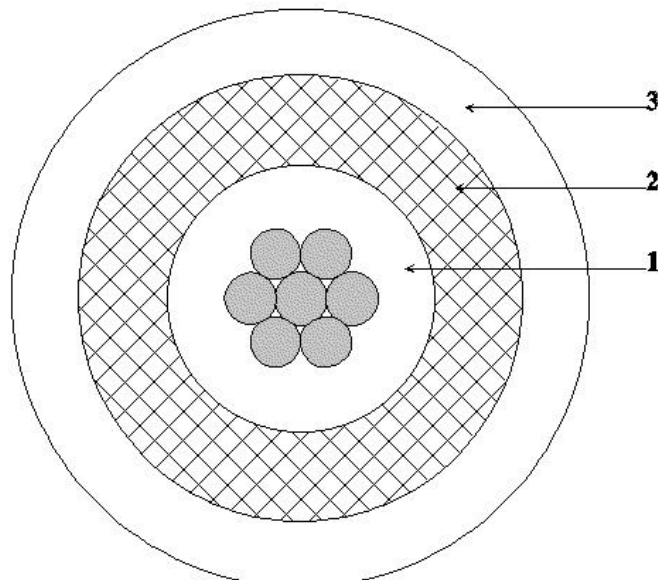
- ❑ Operating temperature : -40°C to + 150°C,
- ❑ Very good chemical resistance,
- ❑ According to NFC 93524

### CONSTRUCTION

- ① 1 CONDUCTOR :  
Tin p. Copper 7x0.13mm  
Section : 0,093mm<sup>2</sup>/AWG28  
Insulation : ETFE  
Ø = 0,67 ± 0.03 mm
- ② SCREEN  
Tinned Copper Braid  
(0.10mm)
- ③ JACKET ETFE  
Ø 1.45 ± 0.04 mm

### Electrical data

- ❑ Operating voltage : 600 V (max.),



ELECTRONIC



# Filotex<sup>®</sup>

## Low Voltage Cable PFA Jacket 260°C

### PRODUCT REFERENCES

FILOTEX Ref : **ET 123 518**

### Applications

- ❑ Harness for Automotive applications : gas Detection and oxygen sensor.

### Main data

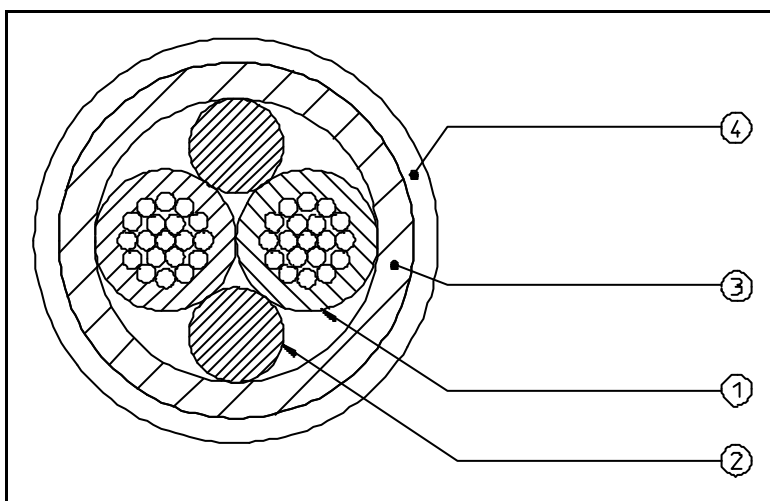
- ❑ Operating temperature : -55°C to + 260°C,
- ❑ Very good chemical resistance,
- ❑ Fire retardant ( Norm NFC 32070/C1)

### CONSTRUCTION

- ① 2 CONDUCTORS :  
Nickel Plated Copper  
19 x 0.22 mm (AWG 20)  
INSULATION  
Extruded PTFE  
Ø 1.85 ± 0.05 mm
- ② 2 FILLERS  
FEP, Ø 1.20 mm
- ③ HELICOIDAL BRAID  
Nickel Plated Copper  
Ø 0.20 mm
- ④ OUTER JACKET  
PFA  
Ø 5.20 ± 0.20 mm

### Electrical data

- ❑ Operating voltage : 600 V (max.),



140 – 146 rue E. Delacroix / BP 1  
F – 91211 Draveil cedex – FRANCE  
Tel : + 33 1 69 83 78 00  
Fax : + 33 1 69 42 05 70

 **Nexans**

Issue 2 - March 2002 - 12 -



# Filotex®

## KZ 05 Unscreened hook-up wires High temperature

### PRODUCT IN THE RANGE

- KZ 04
- **KZ 05**
- KZ 06

### To NF C 93-523 French specification

- Operating voltage : 600 volts
- Operating temperature : -55 °C up to +200 °C (ambient temperature + rise)

### Main characteristics

- **Application :**
  - Internal wiring in electronic equipment
  - Aircrafts and satellites
- Operating frequency : up to 2000 Hz
- Excellent chemical resistance
- They are fire retardant (to NFC 32070/C1 French specification)

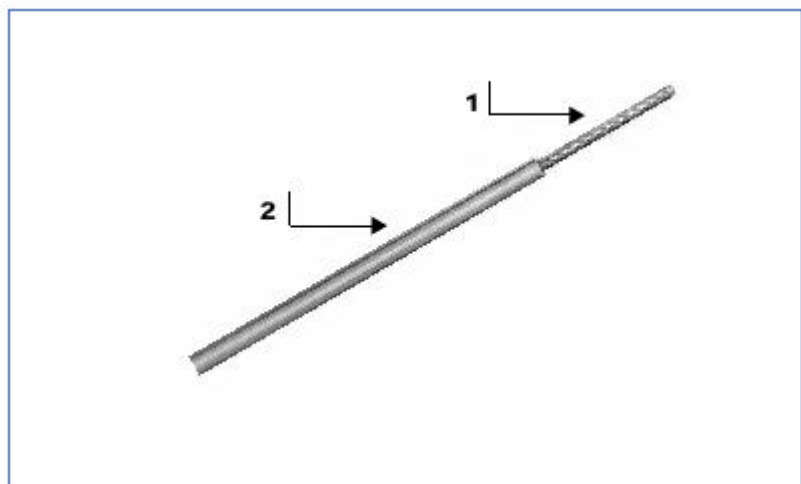
### CONSTRUCTION

#### ① CONDUCTOR

Stranded silvered copper wires

#### ② INSULATION

extruded polytetrafluorethylene (PTFE) (radial thickness according to the gauges : from 0.28 mm up to 0.30 mm)



## UNSCREENED HOOK-UP WIRES

Reference FILOTEX	CONDUCTOR				D.C. resist. at 20°C (Ohms/Km) maxi.	Overall diameter		Maximum weight Kg / Km
	Gauge AWG	Cross section mm <sup>2</sup>	Construction n x Ø mm	Nom. Ø mm		mini.	maxi.	
					mm			
KZ 05 — 01	32	0,035	7 x 0.08	0.24	546	0.63	0.84	1.65
KZ 05 — 02	30	0,055	7 x 0.10	0.30	349	0.71	0.91	2.1
KZ 05 — 03	28	0,093	7 x 0.13	0.39	201	0.79	1.00	2.6
KZ 05 — 04	26	0,14	7 x 0.16	0.48	132	0.89	1.10	3.4
KZ 05 — 05	24	0,22	7 x 0.20	0.60	86	1.04	1.22	4.5
KZ 05 — 06	22	0,34	7 x 0.25	0.75	54.4	1.17	1.37	6.2
KZ 05 — 07	20	0,60	19 x 0.20	1.00	31.3	1.42	1.62	9.5
KZ 05 — 08	18	0.93	19 x 0.25	1.25	20.5	1.67	1.92	14.1
KZ 05 — 09	16	1.34	19 x 0.30	1.50	13.9	1.92	2.27	20.0
KZ 05 — 10	14	1.91	27 x 0.30	1.85	10.0	2.30	2.66	27.0
KZ 05 — 11	12	3.18	45 x 0.30	2.45	6.0	2.89	3.24	42.5



# Filotex®

## KZ 57 Screened and jacketed hook-up wires High temperature

### PRODUCT IN THE RANGE

- KZ 55
- **KZ 57**
- KZ 59

### CONSTRUCTION

Base core : KZ05

#### ① CONDUCTOR

Stranded silvered copper wires

#### ② INSULATION

extruded polytetrafluorethylene (PTFE) (radial thickness according to the gauges : from 0.28 mm up to 0.30 mm)

#### ③ SCREEN

Silvered copper braid

#### ④ OUTER JACKET

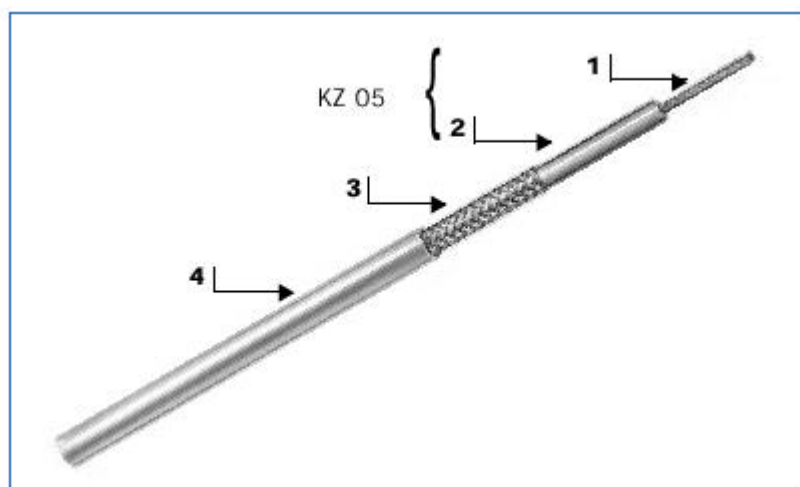
Fluoropolymer (FEP) (radial thickness : 0.30 mm nominal)

### To NF C 93-523 French specification

- Operating voltage : 600 volts
- Operating temperature : -55 °C up to +200 °C (ambient temperature + rise)

### Main characteristics

- **Application :**
  - Internal wiring in electronic equipment
  - Aircrafts and satellites
- Operating frequency : up to 2000 Hz
- Excellent chemical resistance
- They are fire retardant (to NFC 32070/C1 French specification)



## SCREENED AND JACKETED HOOK-UP WIRES

Reference NFC93523 and FILOTEX	BASE CORE					DC resist. at 20°C O/Km Maxi.	Braid Nom. Ø strands mm	Overall diameter		Average weight Kg/Km
	Type	CONDUCTOR						mini.	maxi.	
		Gauge	Cross	Construction	Nom.					
		AWG	section mm <sup>2</sup>							

<b>KZ 57-01</b>	KZ 05-01	32	0.035	7 x 0.08	0.24	546	0.10	1.72	1.97	6.72
<b>KZ 57-02</b>	KZ 05-02	30	0.055	7 x 0.10	0.30	349	0.10	1.79	2.04	7.49
<b>KZ 57-03</b>	KZ 05-03	28	0.093	7 x 0.13	0.39	201	0.10	1.88	2.13	8.39
<b>KZ 57-04</b>	KZ 05-04	26	0.14	7 x 0.16	0.48	132	0.10	1.98	2.23	9.63
<b>KZ 57-05</b>	KZ 05-05	24	0.22	7 x 0.20	0.60	86	0.10	2.11	2.36	11.30
<b>KZ 57-06</b>	KZ 05-06	22	0.34	7 x 0.25	0.75	54.4	0.10	2.25	2.50	13.60
<b>KZ 57-07</b>	KZ 05-07	20	0.60	19 x 0.20	1.00	31.3	0.13	2.65	2.90	20.00
<b>KZ 57-08</b>	KZ 05-08	18	0.93	19 x 0.25	1.25	20.5	0.13	2.93	3.18	26.10
<b>KZ 57-09</b>	KZ 05-09	16	1.34	19 x 0.30	1.50	13.9	0.13	3.23	3.53	33.50
<b>KZ 57-10</b>	KZ 05-10	14	1.91	27 x 0.30	1.85	10.0	0.13	3.61	3.91	42.60
<b>KZ 57-11</b>	KZ 05-11	12	3.18	45 x 0.30	2.45	6.0	0.13	4.19	4.49	61.10

Colour coding: white core - White outer jacket



# Filotex®

## KZ 69 Screened and jacketed pairs High temperature

### PRODUCT IN THE RANGE

- KZ 67
- **KZ 69**
- KZ 71

### CONSTRUCTION

Base core : KZ05

#### ① CONDUCTOR

Stranded silvered copper wires

#### ② INSULATION

extruded polytetrafluorethylene (PTFE) (radial thickness according to the gauges : from 0.25 mm up to 0.30 mm)

#### ③ SCREEN

Silvered copper braid

#### ④ OUTER JACKET

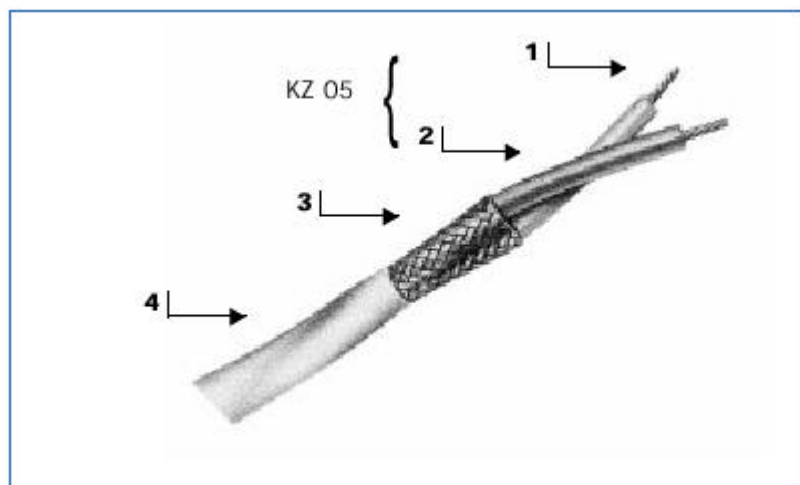
Fluoropolymer (FEP) (radial thickness : 0.30 mm nominal)

### To NF C 93-523 French specification

- Operating voltage : 600 volts
- Operating temperature : -55 °C up to +200 °C (ambient temperature + rise)

### Main characteristics

- **Application :**
  - Internal wiring in electronic equipment
  - Aircrafts and satellites
- Operating frequency : up to 2000 Hz
- Excellent chemical resistance
- They are fire retardant (to NFC 32070/C1 French specification)



## SCREENED AND JACKETED PAIRS

Reference NFC93523  and FILOTEX	BASE CORE					DC resist. at 20°C O/Km maxi.	Braid  Nom. Ø strands mm	Overall diameter		Average weight  Kg/Km
	Type	CONDUCTOR						mini.	maxi.	
		Gauge AWG	Cross section mm <sup>2</sup>	Construction n x Ø mm	Nom. Ø mm					

KZ 69-01	KZ 05-01	32	0.035	7 x 0.08	0.24	573	0.10	2.46	2.71	10.6
KZ 69-02	KZ 05-02	30	0.055	7 x 0.10	0.30	366	0.10	2.60	2.85	12.0
KZ 69-03	KZ 05-03	28	0.093	7 x 0.13	0.39	211	0.10	2.78	3.03	13.7
KZ 69-04	KZ 05-04	26	0.14	7 x 0.16	0.48	138	0.13	3.13	3.38	18.1
KZ 69-05	KZ 05-05	24	0.22	7 x 0.20	0.60	90	0.13	3.39	3.64	21.5
KZ 69-06	KZ 05-06	22	0.34	7 x 0.25	0.75	57	0.13	3.67	3.92	26.2
KZ 69-07	KZ 05-07	20	0.60	19 x 0.20	1.00	33	0.13	4.17	4.42	35.1
KZ 69-08	KZ 05-08	18	0.93	19 x 0.25	1.25	21.5	0.13	4.73	5.08	46.9
KZ 69-09	KZ 05-09	16	1.34	19 x 0.30	1.50	14.6	0.13	5.51	5.86	64.4
KZ 69-10	KZ 05-10	14	1.91	27 x 0.30	1.85	10.5	0.13	6.27	6.62	82.4
KZ 69-11	KZ 05-11	12	3.18	45 x 0.30	2.45	6.3	0.13	7.43	7.78	120.0

Colour coding:

- cores: white + light blue
- outer jacket: white



# Filotex®

## KZ 81 Screened and jacketed triples High temperature

### PRODUCT IN THE RANGE

- KZ 79
- **KZ 81**
- KZ 83

### CONSTRUCTION

Base core : KZ05

#### ① CONDUCTOR

Stranded silvered copper wires

#### ② INSULATION

Extruded polytetrafluorethylene (PTFE) (radial thickness according to the gauges : from 0.25 mm up to 0.30 mm)

#### ③ SCREEN

Silvered copper braid

#### ④ OUTER JACKET

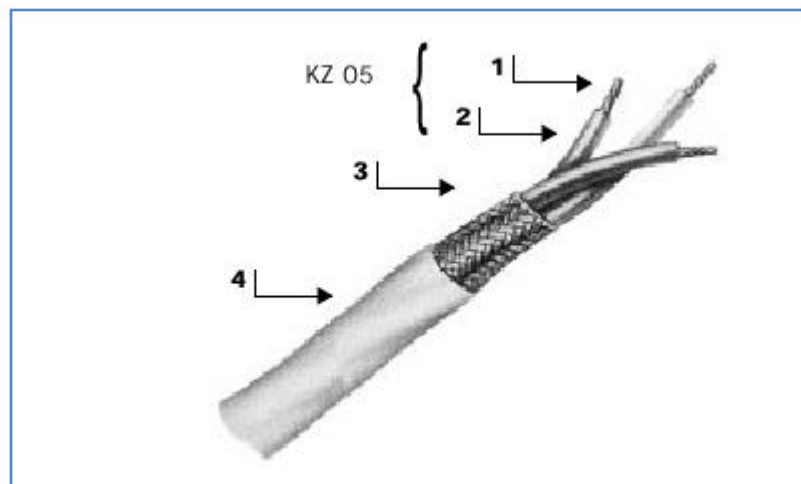
Fluoropolymer (FEP) (radial thickness : 0.30 mm nominal)

### To NF C 93-523 French specification

- Operating voltage : 600 volts
- Operating temperature : -55 °C up to +200 °C (ambient temperature + rise)

### Main characteristics

- **Application :**
  - Internal wiring in electronic equipment
  - Aircrafts and satellites
- Operating frequency : up to 2000 Hz
- Excellent chemical resistance
- They are fire retardant (to NFC 32070/C1 French specification)



## SCREENED AND JACKETED TRIPLES

Reference NFC93523  and FILOTEX	BASE CORE					DC resist. at 20°C O/Km maxi.	Braid Nom. Ø strands mm	Overall diameter		Average weight  Kg/Km
	Type	CONDUCTOR						mini.	maxi.	
		Gauge AWG	Cross section mm <sup>2</sup>	Construction n x Ø mm	Nom. Ø mm					

KZ 81-01	KZ 05-01	32	0.035	7 x 0.08	0.24	573	0.10	2.57	2.82	13.4
KZ 81-02	KZ 05-02	30	0.055	7 x 0.10	0.30	366	0.13	2.87	3.12	17.4
KZ 81-03	KZ 05-03	28	0.093	7 x 0.13	0.39	211	0.13	3.07	3.32	19.9
KZ 81-04	KZ 05-04	26	0.14	7 x 0.16	0.48	138	0.13	3.28	3.53	23.4
KZ 81-05	KZ 05-05	24	0.22	7 x 0.20	0.60	90	0.13	3.56	3.81	28.2
KZ 81-06	KZ 05-06	22	0.34	7 x 0.25	0.75	57	0.13	3.86	4.11	34.8
KZ 81-07	KZ 05-07	20	0.60	19 x 0.20	1.00	33	0.13	4.40	4.65	47.6
KZ 81-08	KZ 05-08	18	0.93	19 x 0.25	1.25	21.5	0.13	5.18	5.53	67.5
KZ 81-09	KZ 05-09	16	1.34	19 x 0.30	1.50	14.6	0.13	5.83	6.18	89.1
KZ 81-10	KZ 05-10	14	1.91	27 x 0.30	1.85	10.5	0.13	6.64	7.00	115
KZ 81-11	KZ 05-11	12	3.18	45 x 0.30	2.45	6.3	0.13	7.89	8.24	169

Colour coding:

- cores: white + light blue + orange
- outer jacket: white

# Part 2

---

## Antenna cables



# Filotex<sup>®</sup>

## Coaxial cable 75 W PVC Jacket Type RG179 PE/PVC

### PRODUCT REFERENCES

FILOTEX Ref : **ET 269 243**

### Applications

- ❑ Coaxial cable for automotive market : CD player connection,
- ❑ High frequency transmission

### Main data

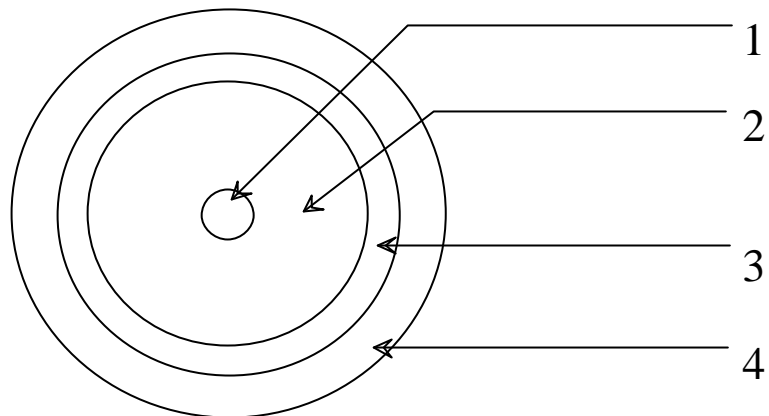
- ❑ Operating temperature : -40°C to + 105°C,

### CONSTRUCTION

- ① CONDUCTOR :  
7 x 0.10 mm Red Copper  
Section : 0.055mm<sup>2</sup> (AWG30)
- ② DIELECTRIC : Polyolefine,  
Ø = 1.60 mm, natural
- ③ SCREEN : braid  
0.10mm Tinned Copper
- ④ JACKET: PVC black  
Ø = 2.54 mm ± 0.10 mm

### Electrical data

- ❑ Characteristic impedance : 75 Ω ± 3 at 200 MHz,
- ❑ Capacitance : < 75 pF / m,
- ❑ Relative propagation velocity : 69%





# Filotex<sup>®</sup>

## Coaxial Cable 50 W RG 174 A/U

### PRODUCT REFERENCES

FILOTEX Ref : **ET 091 498**

### Applications

- ❑ High frequency transmission cable,
- ❑ Coaxial cable also used for automotive market,
- ❑ Car antenna for radio, mobile phone and GPS.

### Main Data

- ❑ Operating Temperature : -40 °C to +85 °C

### CONSTRUCTION

① 7 x 0.16 mm Copper covered-steel  
(0.14 mm<sup>2</sup> , AWG 26)

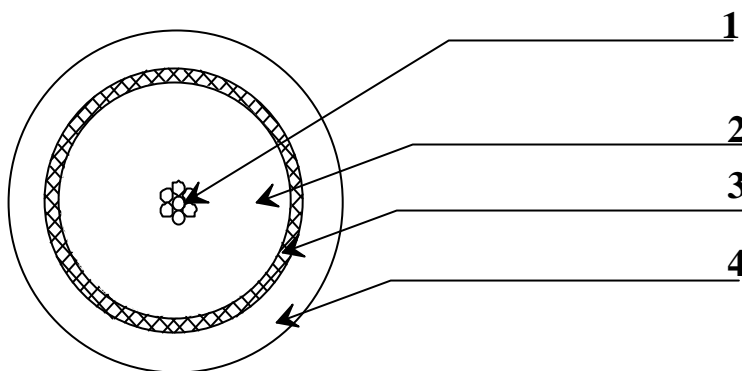
② PE Insulation  
Ø = 1.52 +/- 0.07 mm

③ 0.10 mm Tinned Copper Braid  
Ø = 2.02 mm

④ Black PVC non Migrating Jacket  
Ø = 2.79 ± 0.13 mm

### Electrical values

- ❑ Characteristic impedance : 50 +/- 2 Ohms
- ❑ Capacitance : 106 pF/m.





# Filotex<sup>®</sup>

## Coaxial Cable 50 W PVC Jacket VW approval – Norm N909 489 01

### PRODUCT REFERENCES

FILOTEX Ref : ET 279 160

### CONSTRUCTION

- ① 7 x 0.16 mm Plain Copper  
(0.14 mm<sup>2</sup> , AWG 26)
- ② Natural Polyethylene Insulation  
Ø = 1.52 mm
- ③ 0.10 mm Tinned Copper Braid
- ④ Black PVC Jacket  
Ø = 2.79 mm

### Applications

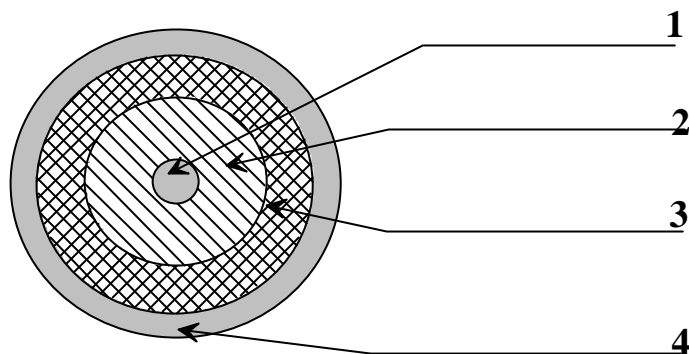
- ❑ Coaxial cable for automotive market : remote control system antenna,
- ❑ High frequency transmission,
- ❑ VW approval : N 909 486 01.

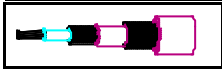
### Electrical values

- ❑ Z.C. : 50 Ohms ± 2 at 200 MHz
- ❑ Capacity : 101 pF/m ± 5%
- ❑ Linear resistance ≤ 320 Ohms/Km
- ❑ Attenuation : 100 MHz ≤ 29.7 dB/100 m  
400 MHz ≤ 61.7 dB/100 m  
1000 MHz ≤ 101.2 dB/100 m  
2000 MHz ≤ 150.6 dB/100 m

### Main data

- ❑ Operating Temperature : -40 °C to +85 °C





# Filotex<sup>®</sup>

## Coaxial Cable 50 W PA Jacket Volvo approval

### PRODUCT REFERENCES

FILOTEX Ref: **ET 2PA 982**

### CONSTRUCTION

- ① CORE  
Tin Plated Copper 19x0.20mm  
Section : 0,60 mm<sup>2</sup> / AWG 20
- ② INSULATION : Foam PE  
∅ = 2.75 mm
- ③ TAPE : aluminum polyester
- ④ SCREEN : Tinned Copper  
Braid (0,10 mm)
- ⑤ JACKET Polyamide black  
∅ = 3.60 mm

### Applications

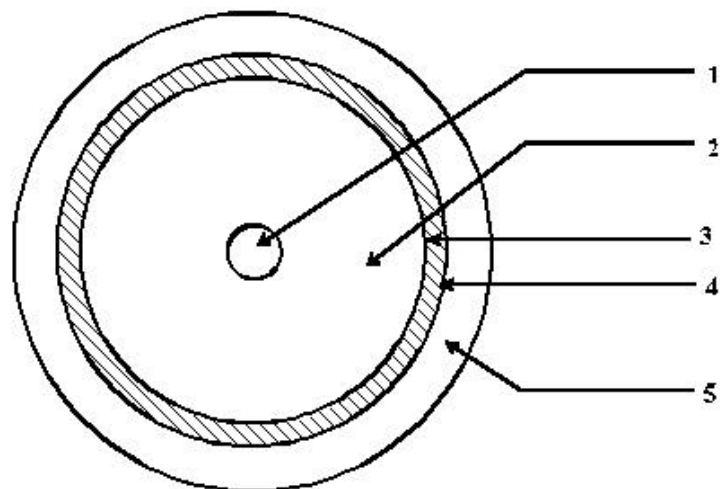
- ❑ Coaxial cable for Automotive market,
- ❑ High frequency transmission cable,
- ❑ Car antenna for radio, mobile phone and GPS.

### Main data

- ❑ Operating temperature : -30°C to +105°C,

### Electrical data

- ❑ Impedance : 50 Ω ± 2 at 200 MHz,
- ❑ Capacity : 84 pF / m,
- ❑ Propagation velocity : 80%,
- ❑ Attenuation : < 50 dB / 100 m at 1GHz,  
< 62 dB / 100 m at 2 GHz,  
< 79.4 dB / 100 m at 3 GHz.





# Filotex<sup>®</sup>

## Coaxial Cable 50 W

### PRODUCT REFERENCES

FILOTEX Ref : **ET 2PE 540**

### CONSTRUCTION

- ① CONDUCTOR  
7x0.27mm bare copper  
Stranded conductor AWG 22
- ② INSULATION  
TEXFOAM<sup>®</sup>  
Diameter = 2.10 mm
- ③ SHIELD  
Aluminium/Polyester/  
Aluminium foil
- ④ SCREEN  
Tinned Copper Braid  
(0,10 mm)  
Optical coverage=90%
- ⑤ JACKET  
Halogen free jacket FNRC  
Diameter = 3.20 ± 0.10 mm

### Applications

- ❑ Coaxial cable for automotive market,
- ❑ High Frequency transmission cable,
- ❑ Car antenna for radio, mobile phone and GPS.

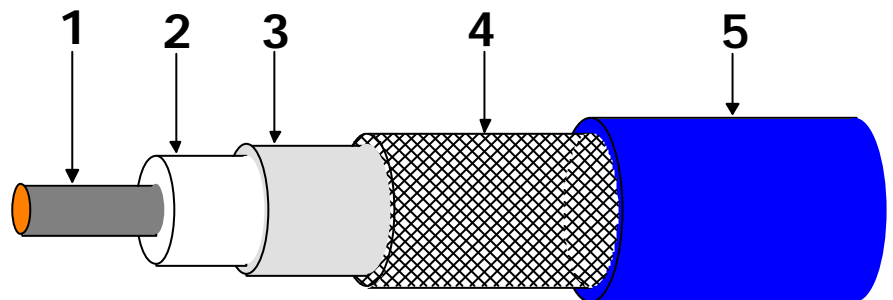
### Electrical characteristics

- ❑ Nominal capacitance at 800Hz = 80pF/m
- ❑ Impedance : 50 ± 3 Ω
- ❑ Conductor DC resistance ≤ 47 Ohm/Km
- ❑ Insulation resistance > 10 GOhm x Km

Frequency (MHz)	1	10	50	100	300	500	1000	2000
Attenuation (dB/100m)	1,7	5	12	17	28	39	56	80

### Mechanical characteristics

- ❑ Operating temperature = -40°C to +80°C
- ❑ Static bending radius = 7,5 x diameter
- ❑ Dynamic bending radius = 15 x diameter





Filotex<sup>®</sup>

## Coaxial Cable 50 W Type RG 316 TPE jacket

### Applications

- ❑ Coaxial cable for automotive market,
- ❑ High Frequency transmission cable,
- ❑ Car antenna for radio, mobile phone and GPS.

### PRODUCT REFERENCES

FILOTEX Ref : ET 2PC072

### Electrical data (acc. to MIL C17 / see our coaxial catalogue)

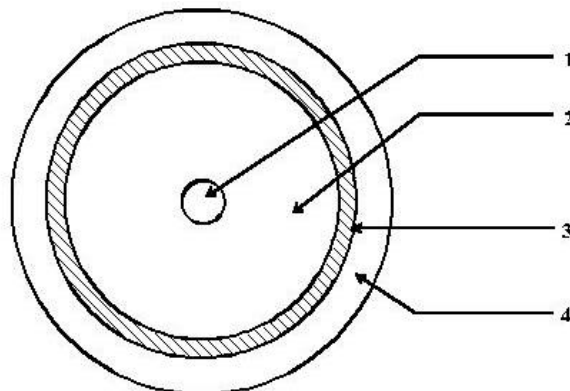
- ❑ Impedance :  $50 \Omega \pm 2 \Omega$  at 200 MHz,
- ❑ Capacity : 105 pF / m,

### CONSTRUCTION

- ① CONDUCTOR :  
7x0.17 mm Tinned Copper  
(AWG 26)
- ② DIELECTRIC : FEP  
 $\varnothing = 1.48$  mm
- ③ SCREEN :  
0.10mm tinned copper braid
- ④ JACKET: TPE, black  
 $\varnothing = 2.55 \pm 0.05$  mm

### Main data

- ❑ Operating temperature : 110°C during 3000 hours  
120°C during 10 min.





# Filotex®

## Coaxial Cable 50 W RG 316 FEP Jacket

### PRODUCT REFERENCES

FILOTEX Ref :  
ET 124 467 : RG 316 PTFE/FEP  
ET 296 891 : RG 316 FEP/FEP

### CONSTRUCTION

#### Flexible PTFE coaxial cable

#### ① CONDUCTOR

7 strands of silver plated copper covered steel

#### ② INSULATION

Extruded PTFE or FEP

#### ③ SHIELD

Silver plated copper braid

#### ④ JACKET

Brown FEP

### Main application

- High frequency transmission cable,
- Coaxial cable also used for automotive market,
- Car antenna for radio, mobile phone and GPS.

### Electrical values

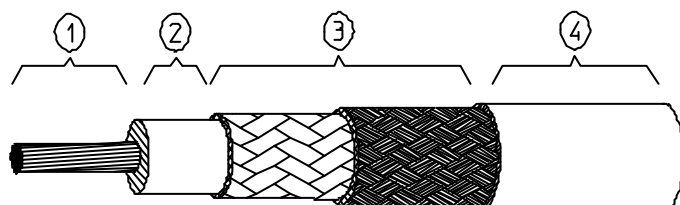
- Voltage rating : 900 Volts (RMS),
- Peak temperature : 200 °C (PTFE/FEP) or 180 °C (FEP/FEP),
- Operating frequency : up to 3 GHz,
- Dimensions and high frequency characteristics : see table below.

FILOTEX PART NUMBER	CAPACITANCE	IMPEDANCE	Relative Velocity of Propagation	ATTENUATION at 900 Mhz	ATTENUATION at 1800 Mhz
RG 316 (124 467)	95 pE/m	50 ± 2 Ω	69.5%	0.80 dB/m	1.2 dB/m
RG 316 (296 891)	95 pE/m	50 ± 2 Ω	69.5%	0.80 dB/m	1.2 dB/m

### Physical properties

- Very good resistance to solvents,
- Very good resistance to soldering operations.

FILOTEX PART NUMBER	CONDUCTOR			INSULATION		SHIELD		JACKET	
	composition	nature	Ø	diameter	material	number	nature	diameter	material
RG 316 (124 467)	7*0.17	SPCCS	0.5 mm	1.50 mm	PTFE	1	SPC	2.5 ± 0.1	FEP
RG 316 (296 891)	7*0.17	SPCCS	0.5 mm	1.50 mm	FEP	1	SPC	2.5 ± 0.1	FEP





# Filotex<sup>®</sup>

## Miniature Coaxial Cable 50 W

### PRODUCT REFERENCES

FILOTEX Ref : **ET 124899**

### CONSTRUCTION

- ① CONDUCTOR  
Solid conductor 0.30 mm  
Silver plated copper clad steel
- ② INSULATION  
Extruded PTFE  
 $\varnothing = 0.89 \pm 0.03$  mm
- ③ SHIELD  
Single braid 0.05 mm  
Silver plated copper
- ④ JACKET  
FEP  
 $\varnothing = 1.45 \pm 0.05$  mm

### Applications

- ❑ Coaxial cable for automotive market,
- ❑ High Frequency transmission cable,
- ❑ Car antenna for radio, mobile phone and GPS.

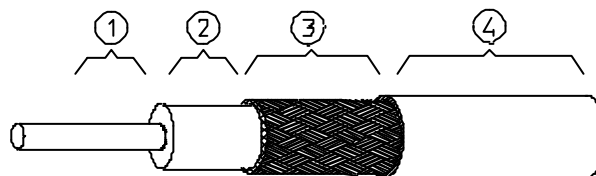
### Electrical characteristics

- ❑ Voltage rating : 750 Volts (RMS)
- ❑ Operating Temperature : -90°C to +200°C
- ❑ Operating Frequency : up to 3 Ghz
- ❑ Impedance :  $50 \pm 5 \Omega$
- ❑ Capacitance : 95 pF/m
- ❑ Propagation velocity : 69.5%
- ❑ Nominal attenuation at :

300 MHz	80 dB/100m
900 MHz	130 dB/100m
1000 MHz	135 dB/100m
1800 MHz	190 dB/100m
3000 MHz	240 dB/100m

### Physical characteristics

- ❑ Very good resistance to solvents
- ❑ Very good resistance to soldering operations
- ❑ Nominal weight : 4.7 g/m





# Filotex<sup>®</sup>

## Coaxial Cable 50 W RG 178 FEP Jacket

### PRODUCT REFERENCES

FILOTEX Ref : ET 111 336

### Main application

- High frequency transmission cable,
- Coaxial cable also used for automotive market,
- Car antenna for radio, mobile phone and GPS.

### Main characteristics

- Voltage rating : 750 Volts (RMS),
- Peak temperature : 200 °C,
- Operating frequency : up to 3 GHz,
- Dimensions and high frequency characteristics : see table below.

FILOTEX PART NUMBER	CONDUCTOR		INSULATION	SHIELD		JACKET
	composition	Ø	diameter	number	nature	diameter
RG 178 (111 336)	7x0.10 mm	0.30 mm	0.84 mm	1	SPC	1.80 ± 0.10 mm

### CONSTRUCTION

#### Flexible PTFE coaxial cable

#### ① CONDUCTOR

7 strands of silver plated copper covered steel

#### ② INSULATION

Extruded PTFE

#### ③ SHIELD

Silver plated copper braid

#### ④ JACKET

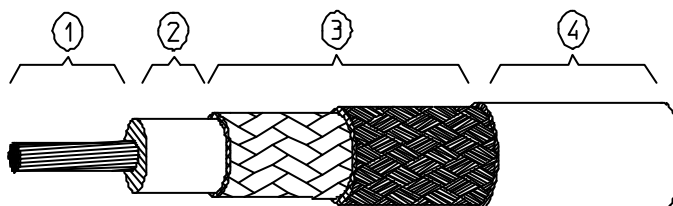
Brown FEP

### Electrical values

FILOTEX PART NUMBER	CAPACITANCE	IMPEDANCE	Relative Velocity of Propagation	ATTENUATION at 900 Mhz	ATTENUATION at 1800 Mhz
RG 178 (111 336)	95 pF/m	50 ± 2Ω	69.5%	1.5 dB/m	2.4 dB/m

### Physical properties

- Very good resistance to solvents,
- Very good resistance to soldering operations.





Filotex®

## Coaxial Cable 50 W RG 178 BU TPE jacket

### PRODUCT REFERENCES

FILOTEX Ref : ET 39 098

### CONSTRUCTION

- ① CONDUCTOR :  
7x0.10 mm Bar Copper  
covered steel  
(AWG 30)
- ② DIELECTRIC : FEP  
Ø = 0.84 mm
- ③ SCREEN :  
0.10mm bare copper braid
- ④ JACKET: ETFE, black  
Ø = 1.80 mm

### Applications

- ❑ High Frequency transmission cable,
- ❑ Coaxial cable also used for automotive market,
- ❑ Car antenna for radio, mobile phone and GPS.

### Electrical data (acc. to MIL C17 / see our coaxial catalogue)

- ❑ Impedance :  $50 \Omega \pm 2 \Omega$  at 200 MHz,
- ❑ Operating voltage : 750 V,
- ❑ Capacity : 105 pF / m,
- ❑ Relative velocity of propagation : 69,5 %
- ❑ Attenuation : 17 dB / 100 m at 10 MHz,  
70 dB / 100 m at 200 MHz,  
100 dB / 100 m at 400 MHz,

### Main data

- ❑ Operating temperature : - 30°C to +110°C,

