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**HIGH TEMPERATURE WIRES AND CABLES
FOR THE GENERAL MARKET**
SECTION III: COMPOSITE INSULATIONS

omerin
LES CABLES DE L'EXTREME

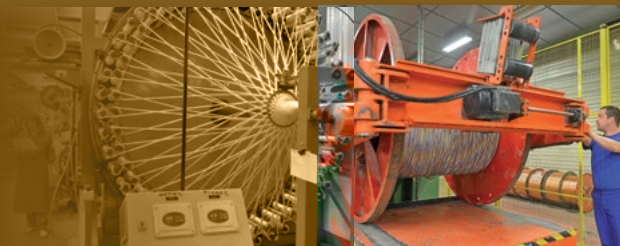


- **The world's leading manufacturer of silicone-insulated wires and cables**
- **Europe's leading manufacturer of glass-yarn braids**
- **France's leading manufacturer of fire safety cables**

The Omerin group has been producing electrical cables for extreme conditions since 1959

At Omerin, we use our know-how and technology to develop increasingly high-performance products.

Our expertise is recognized in over 120 countries.



Omerin offers a wide range of high-performance products covering a large number of applications in very diverse industries, including the electrothermal construction, electromechanical, chemical, nuclear energy, railway, automotive, naval, aerospace, heavy industry, power plant and other sectors. Our product range is further extended by varnished, impregnated and treated braided insulating sleeveings, door seals for ovens, fireproof sleeveings, thermocouple, extension and compensation cables as well as industrial braids.



Men and women at your service

The technical expertise of our teams is at your disposal, providing responses and solutions to all your requirements.

Our Methods, Quality and Research and Development Departments work permanently together with the aim of constantly improving our products and processes.

All our staff subscribe to this approach with their involvement and constant self-checking at all stages of production.

List of all the available catalogues:

HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET

SECTION I: CROSS LINKED ELASTOMERS

1

HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET

SECTION II: FLUOROPOLYMERS AND THERMOPLASTICS

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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET

SECTION III: COMPOSITE INSULATIONS

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FIRE RESISTANT SAFETY CABLES

4

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CABLE SOLUTIONS FOR AUTOMOTIVE AND E-MOBILITY

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PACKAGING AND TECHNICAL DATA

Ultimately, this catalogue is the result of the passionate endeavours of an entire team, who have displayed great talent in writing it for you.

It is designed to be a simple and concise working tool for you, serving as a reference document that is able to meet the majority of your needs.

This catalogue, as well as ten others from our collection are available on line with real time updates and much more information at

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BIO-HABITAT® Wires and cables for a home without electromagnetic interference

CERAFIL® Miniature ceramic insulated wires for very high temperatures

COAXRAIL® Coaxial cables for railway industry

COAXTHERM® High temperature coaxial cables

COUPLIX® Pyrometry cables (thermocouples, extension, compensation cables)

DATARAIL® Data cables for the railway industry

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ENERSYL® Electrical cables for power station and high risk sites

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LUMIPLAST® Wires and cables for lighting systems

METALTRESSE® High performance metallic braids

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MULTI-VX® Hybrid data and power cables

ODIOSIS® Sound, amplification and loudspeaker cables

OILPLAST® Cables for industrial environments and intrinsically safe system

OMBILIFLEX® High performance special multi-function cables

PLASTHERM® Special thermoplastic insulated wires and cables

POWER CONNECT® High performance power cords

PROFIPLAST® Thermoplastic insulated wires and cables

PYRISOL® Fire resistant power cables for safety circuits

PYRITEL® Fire resistant communication cables for safety circuits

SILIBOX® Wire and cables cardboard box packaging system

SILICABLE® Special high temperature wires and cables

SILICOUL® Low and medium voltage class H (180°C) power cables

SILIFLAM® Very high safety cables for extreme temperatures

SILIFLON® Fluoropolymer insulated high temperature wires and cables

SILIGAIN® Braided insulating sleeveings

SILIRAD® Electron beam cross-linked cables

SILITUBE® Braided or extruded tubes

SOLARPLAST® Power cables for photovoltaic solar panels

SONDIX® Platinum resistance temperature sensors connection cables

SPIRFLEX® High performance spiral cables

TEXALARM® Cables for safety systems and fire alarms

TS CABLES® Coaxial and data cables

TS COM 900® Telephonic cables for very speed reception

TS LAN® Copper LAN cables

TWINLINK® High temperature controlled impedance twisted pair cables

TWINPLAST® Extra flexible cables for battery chargers or jump starters

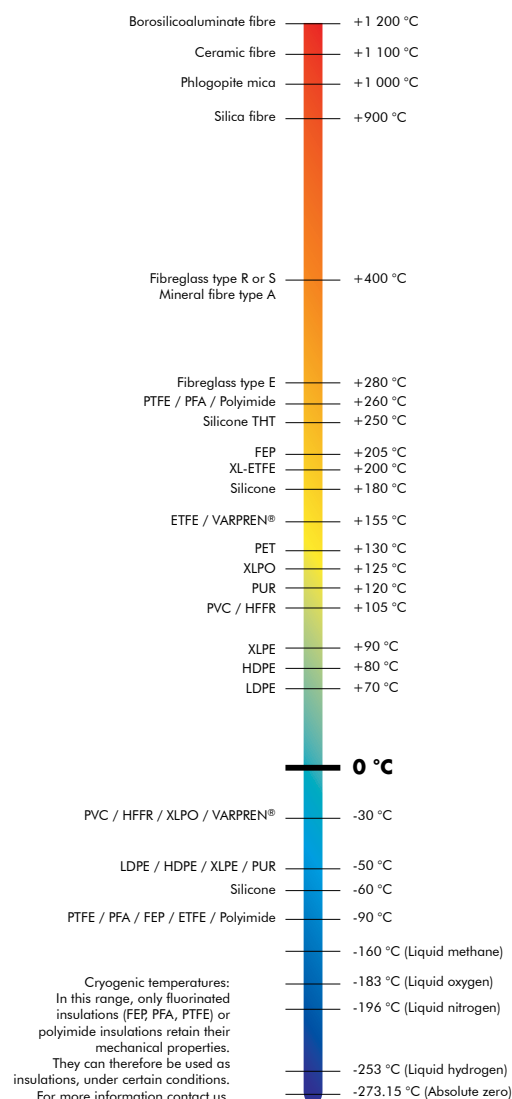
VARPREN® Wires and cables with special cross-linked Varpren® insulation

VEROX® Fiberglass braided seals

VIDEOCOAX® Analog and digital video cables



Thermal classification of insulations



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MULTI-CONDUCTOR WIRES AND CABLES WITH COMPOSITE INSULATION

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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® GHR

Lead wire for hermetically sealed motors

-30 °C to +125 °C

UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Flexible or extra-flexible bare copper core.
- 2 • Heat-stabilized non-coated high resistance polyester braid.
- 3 • Polyester tape(s).
- 4 • Heat-stabilized non-coated high resistance polyester braid.

Applications

- Internal cabling for hermetically sealed motors.

Options

- Other metric or American cross-sections: contact us.
- Other nominal stranding: contact us.
- Other coloured spiral stripe(s): contact us.
- Flexible or extra-flexible tinned copper core.
 - Specific insulation thickness: contact us.

Characteristics General

- Continuous operating temperature: -30°C to +125°C.
- Excellent resistance to R12, R22, R404A, R134a, R407C, R507, etc. refrigerant gases and refrigerant oils.
- Excellent mechanical strength (abrasion, vibration and alternate bending).
- Excellent chemical purity.
- Excellent resistance to aggressive chemical environments.

Electrical

- Rated voltage: 600 Vac.
- Test voltage: 3 000 Vac.

Standard products

- White with coloured spiral stripe(s): blue, red or black.

Conducting core

INSULATED WIRE OR CABLE

Nominal cross-section	Nominal stranding (flexible core)	Nominal stranding (extra-flexible core)	Max. linear resistance at 20 °C (Ω/km)	Nominal Diameter (mm)	Approximate linear weight (kg/km)
AWG (mm²)					
- 0.75	24 x 0.20	42 x 0.15	26.0	1.9	8.6
18 -	-	65 x 0.127	21.8	1.95	9.0
- 1	32 x 0.20	-	19.5	2.1	11.0
16 -	-	105 x 0.127	13.7	2.3	14.9
14 -	-	168 x 0.127	8.62	2.9	22.7
12 -	-	259 x 0.127	5.31	3.3	33.9
- 4	56 x 0.30	-	4.95	3.8	43.0
10 -	-	13 x 0.127	3.41	4.2	54.9
- 6	-	336 x 0.15	3.30	4.1	58.0
9 -	-	378 x 0.15	2.60	4.4	65.6
8 -	-	665 x 0.127	2.15	5.2	86.9
- 10	-	784 x 0.127	1.91	5.3	110
- 16	-	504 x 0.20	1.21	6.5	161
- 25	196 x 0.40	-	0.780	8.0	252
- 35	280 x 0.40	-	0.554	9.5	348

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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® style 5170

Lead wire for hermetically sealed motors

UL and cUL approval

-30 °C to +125 °C



Approvals - standards

- UL and cUL approval (CSA) as per standard UL 758 and C22.2 no. 210 – File no.: E107814.

Applications

- Internal cabling for hermetically sealed motors.

Options

- Other metric or American cross-sections: contact us.
- Other nominal stranding: contact us.
- Other coloured spiral stripe(s): contact us.
- Flexible or extra-flexible tinned copper core.
 - Specific insulation thickness: contact us.
- Style 5048 (-30°C to +105°C / 600 V): contact us.

UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION



- Flexible or extra-flexible bare copper core.
- Heat-stabilized non-coated high resistance polyester braid.
- Polyester tape(s).
- Heat-stabilized non-coated high resistance polyester braid.

Characteristics General

- Continuous operating temperature: -30°C to +125°C.
- Excellent resistance to R12, R22, R404A, R134a, R407C, R507, etc. refrigerant gases and refrigerant oils.
- Excellent mechanical strength (abrasion, vibration and alternate bending).
- Excellent chemical purity.
- Excellent resistance to aggressive chemical environments.

Electrical

- Rated voltage: 600 Vac.
- Test voltage: 3 000 Vac.

Standard products

- White with coloured spiral stripe(s): blue, red or black.

For this product, please contact:

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Conducting core			INSULATED WIRE OR CABLE		
Nominal cross-section	Nominal stranding (flexible core)	Nominal stranding (extra-flexible core)	Max. linear resistance at 20 °C (Ω/km)	Nominal Diameter (mm)	Approximate linear weight (kg/km)
AWG (mm²)					
- 0.75	24 x 0.20	42 x 0.15	26.0	1.9	8.6
18 -	-	65 x 0.127	21.8	1.95	9.0
- 1	32 x 0.20	-	19.5	2.1	11.0
16 -	-	105 x 0.127	13.7	2.3	14.9
14 -	-	168 x 0.127	8.62	2.9	22.7
12 -	-	259 x 0.127	5.31	3.3	33.9
- 4	56 x 0.30	-	4.95	3.8	43.0
10 -	-	13 x 0.127	3.41	4.2	54.9
- 6	-	336 x 0.15	3.30	4.1	58.0
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- 10	-	784 x 0.127	1.91	5.3	110
- 16	-	504 x 0.20	1.21	6.5	161
- 25	196 x 0.40	-	0.780	8.0	252
- 35	280 x 0.40	-	0.554	9.5	348

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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION

SILICABLE® VMT

-50 °C to +155 °C



- 1 • Flexible bare copper core - class 5 as per IEC 60228.
- 2 • Fibreglass lapping.
- 3 • Polyester tape(s).
- 4 • Varnished polyester braid.

Applications

- Cabling for rotating machines: motors, alternators, generators.
- Cabling for static machines: transformers, inductors, inverters, choppers.
- Cabling for cabinets, household lighting appliances.
- Cabling in +130 °C environments maximum requiring very good insulation resistance to abrasion and/or shearing and/or friction.

Options

- Tin-plated copper core: ref. EVMT.
- Up to 6 mm²: solid bare copper core (ref. RVMT) – class 1 as per IEC 60228.
- Up to 2.5 mm²: solid tin-plated copper core (ref. REVMT) – class 1 as per IEC 60228.
- Other nominal cross-sections: contact us.
- Other nominal stranding: contact us.
- Other options: contact us.

Characteristics

General

- Continuous operating temperatures: -50 °C to +130 °C (class B).
- Maximum short-term temperature: +155 °C (class F).
- Good mechanical strength.
- Compatible with most impregnation varnishes.

Electrical

- Rated voltage: 300/500 V.
- Test voltage: 2000 V.

Standard products

- Solid white.
- White with coloured spiral stripe(s).

Flexible core • Class 5 as per IEC 60228

Nominal cross-section (mm ²)	Nominal stranding	Max. linear resistance at 20 °C (Ω/km)
0.25*	8 x 0.20	78.9
0.5	16 x 0.20	39.0
0.75	24 x 0.20	26.0
1	32 x 0.20	19.5
1.5	30 x 0.25	13.3
2.5	50 x 0.25	7.98
4	56 x 0.30	4.95
6	84 x 0.30	3.30
10	80 x 0.40	1.91
16	126 x 0.40	1.21
25	196 x 0.40	0.780
35	276 x 0.40	0.554
50	396 x 0.40	0.386
70	360 x 0.50	0.272

INSULATED WIRE OR CABLE

Nominal diameter (mm)	Approximate linear weight (kg/km)
1.3	2.9
1.6	5.2
1.8	7.5
2.0	9.9
2.2	13.8
2.7	22.7
3.2	37.1
3.8	54.7
5.2	94.0
6.7	151
9.2	244
10.3	327
11.2	467
16.5	679

* Nominal cross-section not described in IEC 60228.

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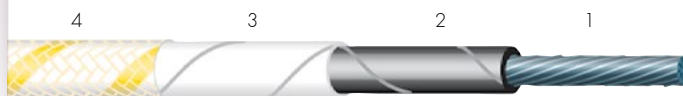
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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® ETNP

-50 °C to +155 °C

UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Flexible tin-plated copper core – class 5 as per IEC 60228.
- 2 • Polyester tape(s).
- 3 • Meta-aramid tape(s).
- 4 • Varnished polyester braid.

Applications

- Cabling for rotating machines: motors, alternators, generators.
- Cabling for static machines: transformers, inductors, inverters, choppers.
- Cabling for cabinets, household lighting appliances.
- Cabling in +155 °C environments maximum requiring very good insulation resistance to abrasion and/or shearing and/or friction.

Options

- Bare copper core: ref. TNP.
- Up to 6 mm²: solid bare copper core (ref. RTNP) – class 1 as per IEC 60228.
- Up to 2.5 mm²: solid tin-plated copper core (ref. RETNP) – class 1 as per IEC 60228.
- Other nominal cross-sections: contact us.
- Other nominal stranding: contact us.
- Other options: contact us.

Characteristics General

- Continuous operating temperatures: -50 °C to +155 °C (class F).
- Good mechanical strength.
- Compatible with most impregnation varnishes.

Electrical

- Rated voltage: 300/500 V.
- Test voltage: 2000 V.

Standard products

- Solid white.
- White with coloured spiral stripe(s).

Flexible core • Class 5 as per IEC 60228

Nominal cross-section (mm ²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)
0.25*	7 x 0.22	81.2
0.5	16 x 0.20	40.1
0.75	24 x 0.20	26.7
1	32 x 0.20	20.0
1.5	30 x 0.25	13.7
2.5	50 x 0.25	8.21
4	56 x 0.30	5.09
6	84 x 0.30	3.39
10	80 x 0.40	1.95
16	126 x 0.40	1.24
25	196 x 0.40	0.795
35	276 x 0.40	0.565
50	396 x 0.40	0.393
70	360 x 0.50	0.277

INSULATED WIRE OR CABLE

Nominal diameter (mm)	Approximate linear weight (kg/km)
1.3	3.1
1.5	5.1
1.7	7.3
1.9	9.5
2.2	13.8
2.6	22.3
3.0	34.3
3.6	50.9
5.4	95.4
7.2	153
8.5	236
9.9	325
11.4	459
13.4	639

* Nominal cross-section not described in IEC 60228.

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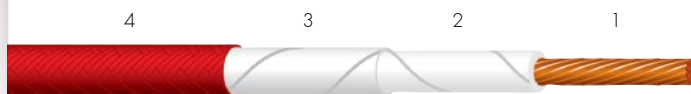
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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® NMVRI

-60 °C to +180 °C

UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Flexible bare copper core – class 5 as per IEC 60228.
- 2 • Meta-aramid tape(s).
- 3 • Polyester tape(s).
- 4 • Varnished fibreglass braid.

Applications

- Cabling for rotating machines: motors, alternators, generators.
- Cabling for static machines: transformers, inductors, inverters, choppers.

Options

- Ref. NMVRI-ES : extra-flexible bare copper core – class 6 as per IEC 60228. (see details of this option below).
- Other cross-sections or colours: contact us.
- Outer braid in silicone coated fibreglass: ref. NMV.

Characteristics General

- Continuous operating temperatures: -60 °C to +180 °C (class H).
- Good mechanical strength.
- Compatible with most impregnation varnishes.

Electrical

- Rated voltage: 300/500 V.
- Test voltage: 2000 V.

Standard products

- All solid colours.
- All colours with coloured spiral stripe(s).

NMVRI

Flexible core • Class 5 as per IEC 60228

Nominal cross-section (mm²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)
0.5	16 x 0.20	39.0
0.75	24 x 0.20	26.0
1	32 x 0.20	19.5
1.5	30 x 0.25	13.3
2.5	50 x 0.25	7.98
4	56 x 0.30	4.95
6	84 x 0.30	3.30
10	80 x 0.40	1.91
16	126 x 0.40	1.21
25	196 x 0.40	0.780
35	276 x 0.40	0.554
50	396 x 0.40	0.386
70	360 x 0.50	0.272
95	485 x 0.50	0.206

INSULATED WIRE OR CABLE

Nominal diameter (mm)	Approximate linear weight (kg/km)
1.7	6.0
1.9	8.9
2.1	11.2
2.3	15.6
2.8	24.5
3.4	39.1
4.0	56.7
6.2	103
7.0	159
8.8	248
9.8	337
11.5	485
13.2	667
17.0	1011

Option • NMVRI-ES

Extra-flexible core • Class 6 as per IEC 60228

1.5	390 x 0.07	13.3
2.5	650 x 0.07	7.98
4	1050 x 1.34	4.95
6	301 x 0.15	3.30
10	322 x 0.20	1.91
16	516 x 0.20	1.21
25	792 x 0.20	0.780
35	1121 x 0.20	0.554
50	1628 x 0.20	0.386
70	2294 x 0.20	0.272

INSULATED WIRE OR CABLE

2.6	15.6
2.9	24.5
3.4	39.1
4.1	56.7
6.2	103
7.0	159
8.8	248
9.8	337
11.5	485
13.2	667

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* Nominal cross-section not included in IEC 60228.

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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® PVS

-60 °C to +230 °C

UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Flexible bare copper core – class 5 as per IEC 60228.
- 2 • Impregnated fibreglass lappings.
- 3 • Crossed polyester tapes.
- 4 • Silicone-coated fibreglass braid.

Applications

- Cabling for domestic electrical heating appliances: kitchens, professional ovens, etc.
- Industrial cabling in hot atmospheres.
 - Cabling for paint booths.
- Cabling for collector vehicles.

Options

- Solid bare copper core – class 1 as per IEC 60228: ref. RPVS (see details of this option below).
- Reinforced wall and yellowed outer aspect for cabling for collector vehicles: ref. PVP.
- Completely silicone-free for cabling for paint booths: ref. PVPL.

Characteristics

General

- Continuous operating temperatures: -60 °C to +230 °C.
- Reinforced resistance to humidity.

Electrical

- Rated voltage: 300/500 V.
- Test voltage: 2000 V.

Standard products

- All solid colours with coloured spiral stripe(s).

PVS

Flexible core • Class 5 as per IEC 60228

Nominal cross-section (mm²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)
0.5	16 x 0.20	39.0
0.6**	19 x 0.20	32.8
0.75	24 x 0.20	26.0
1	14 x 0.30*	19.5
1.5	30 x 0.25	13.3
2**	40 x 0.25	9.98
2.5	50 x 0.25	7.98
3**	42 x 0.30	6.60
4	56 x 0.30	4.95
6	84 x 0.30	3.30

INSULATED WIRE

Nominal diameter (mm)	Approximate linear weight (kg/km)
2.1	8.1
2.2	9.0
2.3	10.8
2.4	13.5
2.7	17.0
3.0	21.6
3.2	26.6
3.4	31.6
3.8	43.2
4.5	66.0

Option • RPVS

Solid core • Class 1 as per IEC 60228

Nominal cross-section (mm²)	Nominal diameter (mm)	Maximum linear resistance at 20 °C (Ω/km)
0.5	0.80	36.0
0.75	0.98	24.5
1	1.13	18.1
1.5	1.38	12.1
2.5	1.77	7.41
4	2.24	4.61
6	2.76	3.08

INSULATED WIRE

Nominal diameter (mm)	Approximate linear weight (kg/km)
2.0	8.1
2.2	10.7
2.3	12.8
2.5	17.5
3.0	27.5
4.0	46.2
4.5	67.3

* Stranded core - class 2 as per IEC 60228.

** Nominal cross-sections not described in IEC 60228.

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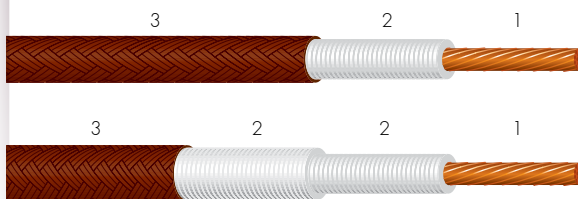
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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILISOL® 1G and 2G -60 °C to +350 °C

UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Flexible bare copper core - class 5 as per IEC 60228.
- 2 • Impregnated fibreglass.
- 3 • Varnished fibreglass braid.

Applications

- Motor car reference – Sensor's cable for brake pad wear.

Characteristics

General

- Continuous operating temperatures: -60 °C to +350 °C.
- Good resistance to thermal shocks and atmospheric agents (UV, Ozone, Oxygen, etc.).
- Minimum bending radius: 5 x D.

Electrical

- Rated voltage: 12 V/24 V.
- Test voltage: 2000 V/3000 V.

Standard products

- Standard nominal cross-section: 0.75mm².
- Available in 2 standard insulation thicknesses.
- Standard colour: brown.

Flexible core • Class 5 as per IEC 60228

INSULATED WIRE

Nominal cross-section (mm ²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Nominal diameter (mm)	Approximate linear weight (kg/km)
Reference 1G2010C				
0.75	24 x 0.20	26.0	2.1	10.9
Reference 2G2010C				
0.75	24 x 0.20	26.0	2.45	13.2

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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® VS -60 °C to +280 °C



Approvals - standards

- VERITAS approval certificates:
 - > No. BV 153552.
 - > No. BV 256192.
 - > No. BV 256096 – 2 hours at 400 °C.

Applications

- Cabling for heating resistors, cartridges, bands and plates.
- Cabling for domestic electrical heating appliances: kitchens, professional ovens, etc.
- Machines for thermoplastics or rubber.
- Industrial furnaces and air ovens.

Options

- Solid bare copper core – class 1 as per IEC 60228: ref. RVS (see details of this option below).
- Tin-plated copper core: ref. EVS.
- Reduced outer diameters: ref. VSL.
- Other nominal cross-sections: contact us.
- Other nominal stranding: contact us.
- Other options: contact us.

UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Flexible bare copper core - class 5 as per IEC 60228.
- 2 • Impregnated fibreglass lappings.
- 3 • Silicone-coated fibreglass braid.

Characteristics General

- Continuous operating temperatures: -60 °C to +280 °C.
- Good resistance to thermal shock.

Electrical

- Rated voltage: 300/500 V.
- Test voltage: 2000 V.

Standard products

- Standard colour: brown.
- Other colours on request including yellow/green.

VS

Flexible core • Class 5 as per IEC 60228

Nominal cross-section (mm²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)
0.25*	8 x 0.20	78.9
0.5	16 x 0.20	39.0
0.75	24 x 0.20	26.0
1	32 x 0.20	19.5
1.5	30 x 0.25	13.3
2.5	50 x 0.25	7.98
4	56 x 0.30	4.95
6	84 x 0.30	3.30
10	80 x 0.40	1.91
16	126 x 0.40	1.21
25	196 x 0.40	0.780
35	276 x 0.40	0.554
50	396 x 0.40	0.386
70	360 x 0.50	0.272
95	485 x 0.50	0.206
120	608 x 0.50	0.161
150	756 x 0.50	0.129
185	944 x 0.50	0.106
240	1221 x 0.50	0.0801

INSULATED WIRE OR CABLE

Nominal diameter (mm)	Approximate linear weight (kg/km)
1.9	5.7
2.1	8.8
2.4	11.9
2.5	14.5
2.8	19.1
3.2	29.3
4.0	47.4
4.6	67.5
6.6	106
7.9	192
10.0	302
12.0	395
13.4	556
16.3	785
18.0	1032
19.5	1278
22.5	1629
24.4	1957
27.5	2569

Option • RVS

Solid core • Class 1 as per IEC 60228

Nominal cross-section (mm²)	Nominal diameter (mm)	Maximum linear resistance at 20 °C (Ω/km)
0.5	1 x 0.80	36.0
0.75	1 x 0.98	24.5
1	1 x 1.13	18.1
1.5	1 x 1.38	12.1
2.5	1 x 1.77	7.41
4	1 x 2.24	4.61
6	1 x 2.76	3.08

INSULATED WIRE

Nominal diameter (mm)	Approximate linear weight (kg/km)
2.1	9.0
2.3	11.3
2.4	14.3
2.6	19.4
3.0	29.1
3.8	47.5
4.3	68.8

* Nominal cross-section not described in IEC 60228.

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LES CABLES DE L'EXTREME

HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® TEVS

-60 °C to +280 °C

UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Flexible bare copper core - class 5 as per IEC 60228.
- 2 • PTFE tape.
- 3 • Silicone-coated fibreglass braid.

For implementation purposes, this cable may include one or more fibreglass lappings above or below the PTFE tape.

Applications

- Cabling for heating resistors, cartridges, bands and plates.
- All cabling requiring enhanced chemical resistance.
- Cabling for domestic or professional electrical appliances.

Options

- Nickel-plated copper core: ref. CNTEVS.
- Pure nickel core (not described in IEC 60228): ref. NTEVS.
- Fibreglass outer braid coated with PTFE varnish: ref. TEVF.
- Silicone-coated mineral fibreglass outer braid: ref. TEVAS.
- Other nominal cross-sections: contact us.
- Other nominal stranding: contact us.
- Other options and/or combinations of the options outlined above: contact us.

Characteristics

General

- Continuous operating temperatures: -60 °C to +280 °C.
- Good resistance to thermal shock.
- Enhanced resistance to moisture and common chemical agents.

Electrical

- Rated voltage: 300/500 V.
- Test voltage: 2000 V.

Standard products

- All solid colours.
- All colours with coloured spiral stripe(s).

Flexible core • Class 5 as per IEC 60228

Nominal cross-section (mm²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)
0.22*	7 x 0.20	89.9
0.34*	7 x 0.25	57.5
0.5	16 x 0.20	39.0
0.75	24 x 0.20	26.0
1	32 x 0.20	19.5
1.5	30 x 0.25	13.3
2.5	50 x 0.25	7.98
4	56 x 0.30	4.95
6	84 x 0.30	3.30
10	80 x 0.40	1.91
16	126 x 0.40	1.21
25	196 x 0.40	0.780
35	276 x 0.40	0.554
50	396 x 0.40	0.386
70	360 x 0.50	0.272
95	485 x 0.50	0.206

INSULATED WIRE OR CABLE

Nominal diameter (mm)	Approximate linear weight (kg/km)
1.3	4.5
1.7	6.7
2.1	8.7
2.4	11.9
2.5	14.3
2.8	19.1
3.2	29.3
3.8	47.4
4.4	67.5
6.2	106
7.9	192
10.0	302
12.0	395
13.4	556
16.3	785
18.0	1032

* Nominal cross-sections not described in IEC 60228.

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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® CNVS

-60 °C to +280 °C



Approvals - standards

- Nickel-plated copper complying with the 2 % class as per standard ASTM B355.
 - VERITAS approval certificates:
 - > No. BV 153552.
 - > No. BV 256192.
- > No. BV 256096 – 2 hours at 400 °C.

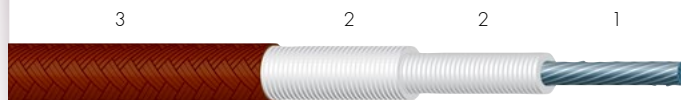
Applications

- Cabling for heating resistors, cartridges, bands and plates.
- Cabling for domestic electrical heating appliances kitchens, professional ovens, etc.
- Machines for thermoplastics or rubber.
- Industrial furnaces and air ovens.

Options

- Reduced outer diameters: ref. CNVSL.
- Nickel-plated copper complying with the 27% class as per standard ASTM B355 for reinforced oxidization resistance: contact us.
- Other nominal cross-sections: contact us.
 - Other options: contact us.

UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Stranded or flexible nickel-plated copper core – class 2 or 5 as per IEC 60228.
- 2 • Impregnated fibreglass lappings.
- 3 • Silicone-coated fibreglass braid.

Characteristics

General

- Continuous operating temperatures: -60 °C to +280 °C.
- Good resistance to thermal shocks and oxidization.

Electrical

- Rated voltage: 300/500 V.
- Test voltage: 2000 V.

Standard products

- Standard colour: brown.
- Other colours on request including yellow/green.

Conducting core			INSULATED WIRE OR CABLE	
Nominal cross-section (mm²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Nominal diameter (mm)	Approximate linear weight (kg/km)
0.25*	8 x 0.20	87.2	1.9	5.7
0.5	7 x 0.30	36.7	2.1	8.8
0.75	11 x 0.30	24.8	2.4	11.9
1	14 x 0.30	18.2	2.5	14.5
1.5	21 x 0.30	12.2	2.8	19.1
2.5	35 x 0.30	7.56	3.2	29.3
4	56 x 0.30	5.09	4.0	47.4
6	84 x 0.30	3.39	4.6	67.5
10	80 x 0.40	1.95	6.6	106
16	126 x 0.40	1.24	7.9	192
25	196 x 0.40	0.795	10.0	302
35	276 x 0.40	0.565	12.0	395
50	396 x 0.40	0.393	13.4	556
70	543 x 0.40	0.277	16.3	785
95	740 x 0.40	0.210	18.0	1032

* Nominal cross-sections not described in IEC 60228.

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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® NVS

-60 °C to +350 °C



Approvals - standards

- Nickel type 200, as per standards DIN 17753, DIN 17740 and ASTM B160.
- VERITAS approval certificates:
 - > No. BV 153552.
 - > No. BV 256192.
- VDE test report no. 9296-5950-0001/32YAT F42/sld-Fc.

Applications

- Cabling for heating resistors, cartridges, bands and plates.
- Domestic electrical heating appliances: kitchens, professional ovens, etc.
- Machines for thermoplastics or rubber.
 - Industrial furnaces and air ovens.

Options

- Reduced outer diameters: ref. NVSL (See details of this option below).
 - Fibreglass outer braid coated with PTFE varnish: ref. NVF.
- Other nominal cross-sections: contact us.
 - Other core stranding: contact us.

UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Stranded or flexible nickel core.
- 2 • Impregnated fibreglass lappings.
- 3 • Silicone-coated fibreglass braid.

Characteristics

General

- Continuous operating temperatures: -60 °C to +350 °C.
- Excellent resistance to thermal shocks and oxidation of core.

Electrical

- | | | |
|------------------|------------|-------------|
| | NVS | NVSL |
| • Rated voltage: | 300/500 V | 300/300 V. |
| • Test voltage: | 2000 V | 1500 V. |

Standard products

- Standard colour: brown.
- Other colours on request including yellow/green.

NVS

Conducting core			INSULATED WIRE OR CABLE	
Nominal cross-section (mm²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Nominal diameter (mm)	Approximate linear weight (kg/km)
0.22	7 x 0.20	573	1.4	4.6
0.25	8 x 0.20	503	1.9	5.7
0.5	7 x 0.30	229	2.1	8.8
0.75	11 x 0.30	156	2.4	11.9
1	14 x 0.30	115	2.5	14.5
1.34	19 x 0.30	93.1	2.6	15.9
1.5	21 x 0.30	77.2	2.8	19.1
2	29 x 0.30	58.0	3.0	22.1
2.5	35 x 0.30	47.2	3.2	29.3
4	56 x 0.30	31.5	4.3	47.4
6	84 x 0.30	21.0	4.8	67.5
8	119 x 0.30	15.5	5.8	82.3
10	140 x 0.30	12.1	6.8	106
16	224 x 0.30	7.72	8.2	192
25	354 x 0.30	4.97	10.1	302
35	495 x 0.30	3.53	12.0	395
50	707 x 0.30	2.46	13.2	556
70	999 x 0.30	1.73	16.3	785

Option • NVSL

Conducting core			INSULATED WIRE	
Nominal cross-section (mm²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Nominal diameter (mm)	Approximate linear weight (kg/km)
0.22	7 x 0.20	573	1.2	3.8
0.25	8 x 0.20	503	1.3	4.1
0.34	11 x 0.20	366	1.4	5.1
0.5	7 x 0.30	229	1.4	6.2
0.75	11 x 0.30	156	1.8	9.0
1	14 x 0.30	115	2.1	10.9
1.34	19 x 0.30	93.1	2.3	14.5
1.5	21 x 0.30	77.2	2.5	15.2
2	29 x 0.30	58.0	2.7	20.7
2.5	35 x 0.30	47.2	3.0	24.5
4	56 x 0.30	31.5	3.6	38.6
6	84 x 0.30	21.0	4.4	57.7

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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILISOL® NTSD-L and NTSD -60 °C to +400 °C

UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Concentric nickel core.
- 2 • Impregnated fibreglass.
- 3 • Coated fibreglass braid.

Approvals - standards

- Nickel type 200, as per standards DIN 17753, DIN 17740 and ASTM B160.

Applications

- Cabling for heating resistors, cartridges, bands and plates.
- Domestic electrical heating appliances: kitchens, professional ovens, etc.
- Machines for thermoplastics or rubber.
 - Industrial furnaces and air ovens.

Options

- Other nominal cross-sections: contact us.
- Other nominal stranding: contact us.
- Other options: contact us.

Characteristics General

- Continuous operating temperatures: -60 °C to +400 °C.
- Excellent resistance to thermal shocks and oxidization of core.

Electrical

- | | | |
|------------------|---------------|-------------|
| | NTSD-L | NTSD |
| • Rated voltage: | 300/500 V | 300/500 V. |
| • Test voltage: | 2000 V | 3000 V. |

Standard products

- Standard colour: white.
- Other colours on request including white with coloured spiral stripe.

NTSD-L

Concentric nickel core

Nominal cross-section (mm²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)
0.22	7 x 0.20	573
0.34	7 x 0.25	366
0.5	16 x 0.20	248
0.75	24 x 0.20	165
1	32 x 0.20	124
1.5	30 x 0.25	84.8
2.5	50 x 0.25	50.9

INSULATED WIRE

Nominal diameter (mm)	Approximate linear weight (kg/km)
1.4	4.3
1.5	5.2
1.6	6.4
1.8	9.0
2.1	10.9
2.5	15.2
3.1	24.5

NTSD

Concentric nickel core

Nominal cross-section (mm²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)
0.22	7 x 0.20	573
0.34	7 x 0.25	366
0.5	16 x 0.20	248
0.75	24 x 0.20	165
1	32 x 0.20	124
1.5	30 x 0.25	84.8
2.5	50 x 0.25	50.9

INSULATED WIRE

Nominal diameter (mm)	Approximate linear weight (kg/km)
1.8	6.9
2.0	7.8
2.1	8.7
2.4	11.9
2.5	13.8
2.8	18.8
3.2	28.3

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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® CNVAS

-60 °C to +400 °C



UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Stranded or flexible nickel-plated copper core – class 2 or 5 as per IEC 60228.
- 2 • Impregnated fibreglass lappings.
- 3 • Silicone-coated mineral fibre braid.

Approvals - standards

- Nickel-plated copper complying with the 2 % class as per standard ASTM B355.
 - VERITAS approval certificates:
 - > No. BV 153552.
 - > No. BV 256192.

Applications

- Cabling for heating resistors, cartridges, bands and plates.
- Cabling for domestic electrical heating appliances: kitchens, professional ovens, etc.
- Machines for thermoplastics or rubber.
 - Industrial furnaces and air ovens.
- Heavy industry: foundries, steelworks, glassworks, etc.

Options

- Bare copper core: ref. VAS.
- Nickel-plated copper core complying with the 27 % class as per standard ASTM B355 for reinforced resistance to oxidization: contact us.
- Other nominal cross-sections: contact us.
 - Other options: contact us.

Characteristics General

- Continuous operating temperatures: -60 °C to +400 °C.
- Good resistance to thermal shocks and oxidization.

Electrical

- Rated voltage: 300/500 V.
- Test voltage: 2000 V.

Standard products

- Standard colour: grey.
- Other colours on request including yellow/green.

Conducting core			INSULATED WIRE OR CABLE	
Nominal cross-section (mm ²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Nominal diameter (mm)	Approximate linear weight (kg/km)
0.25*	8 x 0.20	87.2	2.2	7.9
0.34*	7 x 0.25	63.6	2.3	9.2
0.5	7 x 0.30	36.7	2.5	11.1
0.75	11 x 0.30	24.8	2.7	14.3
1	14 x 0.30	18.2	3.2	19.9
1.5	21 x 0.30	12.2	3.4	25.6
2.5	35 x 0.30	7.56	4.0	36.4
4	56 x 0.30	5.09	4.5	56.3
6	84 x 0.30	3.39	5.0	73.9
10	80 x 0.40	1.95	8.0	149
16	126 x 0.40	1.24	9.0	225
25	196 x 0.40	0.795	10.6	321
35	276 x 0.40	0.565	13.0	442
50	396 x 0.40	0.393	14.4	576
70	543 x 0.40	0.277	16.5	827
95	740 x 0.40	0.210	18.5	1102
120	925 x 0.40	0.164	20.2	1327
150	1184 x 0.40	0.132	23.0	1741
185	1443 x 0.40	0.108	25.9	2061
240	1924 x 0.40	0.0817	27.9	2666

* Nominal cross-sections not described in IEC 60228.

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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® NVAS

-60 °C to +450 °C



UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Stranded or flexible nickel core.
- 2 • Impregnated fibreglass lappings.
- 3 • Silicone-coated mineral fibre braid.

Approvals - standards

- Nickel type 200, as per standards DIN 17753, DIN 17740 and ASTM B160.
- VERITAS approval certificates:
 - > No. BV 153552.
 - > No. BV 256192.
- VDE test report no. 9296-5950-0001/32YAT F42/sld-Fc.

Applications

- Cabling for heating resistors, cartridges, bands and plates.
- Cabling for domestic electrical heating appliances: kitchens, professional ovens, etc.
- Machines for thermoplastics or rubber.
 - Industrial furnaces and air ovens.
- Heavy industry: foundries, steelworks, glassworks, etc.

Options

- Fibreglass insulation for very high temperatures: ref. NVS-R (reduced outer diameters).
- Other nominal cross-sections: contact us.
 - Other options: contact us.

Characteristics General

- Continuous operating temperatures: -60 °C to +450 °C.
- Excellent resistance to thermal shocks and oxidization of core.

Electrical

- Rated voltage: 300/500 V.
- Test voltage: 2000 V.

Standard products

- Standard colour: grey.
- Other colours on request including yellow/green.

Conducting core			INSULATED WIRE OR CABLE	
Nominal cross-section (mm ²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Nominal diameter (mm)	Approximate linear weight (kg/km)
0.25	8 x 0.20	503	2.2	8.5
0.5	7 x 0.30	229	2.5	10.4
0.75	11 x 0.30	156	2.7	12.9
1	14 x 0.30	115	3.2	17.9
1.5	21 x 0.30	77.2	3.4	24.2
2	29 x 0.30	58.0	3.6	30.6
2.5	35 x 0.30	47.2	4.0	34.9
4	56 x 0.30	31.5	4.5	49.2
6	84 x 0.30	21.0	5.0	71.5
10	140 x 0.30	12.1	8.0	138
16	224 x 0.30	7.72	9.0	205
25	354 x 0.30	4.97	10.6	300
35	495 x 0.30	3.53	13.0	401
50	707 x 0.30	2.46	14.4	578

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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

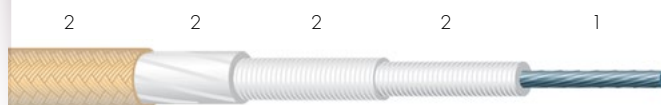
SILICABLE® 250 °C

Composite insulation

UL and cUL approval



UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Nickel or nickel-plated copper core.
- 2 • Composite insulation: PTFE tape(s) and/or fiberglass lapping + varnished fiberglass braid.

Characteristics

General

- Maximum continuous operating temperature: +250 °C.
- Good resistance to thermal shocks and oxidization.

Electrical

- Rated voltage: as per style no. (see opposite table).
- Test voltage: as per style no.

Standard products

- Standard colours: grey, brown or natural.
- Stranding of conducting cores: contact us.

Approvals - standards

- UL approval as per standard UL 758 – File no.: E101965.
- cUL approval (CSA) as per standard C22.2 No. 210 - File no.: E101965.
- Nickel-plated copper complying with the 2% or 27% class as per standard ASTM B355.
- Nickel type 200 as per standard ASTM B160.
 - "Horizontal flame test" as per UL approval.
 - "FT2 flame rating" as per cUL approval.

Applications

- Cabling for industrial furnaces and air ovens.
 - Cabling for heating resistors, cartridges, bands and plates.
- Cabling for domestic or professional electrical appliances.

Options

- Other colours: contact us.
- Individual or general electrical shielding: contact us.
- Other style nos. available: styles no. 5035, 5047, 5214 and 5215.

Style no.

5167

5257

Approval

250 °C – 300 V

250 °C – 300 V

Nominal cross-section AWG	(mm ²)	Average thickness of insulation (mm)	Nominal diameter* (mm)	Average thickness of insulation (mm)	Nominal diameter* (mm)
30	0.05	-	-	-	-
28	0.09	-	-	-	-
26	0.13	-	-	-	-
24	0.22	NS	1.7	0.20	1.4
22	0.34	NS	2.0	0.20	1.5
-	0.5	NS	2.1	0.20	1.7
20	0.6	NS	2.2	0.20	1.7
-	0.75	NS	2.4	0.20	2.0
18	0.93	NS	2.4	0.20	2.1
-	1	NS	2.5	0.20	2.2
16	1.34	NS	2.7	0.30	2.6
-	1.5	NS	2.8	0.30	2.7
14	-	NS	3.1	0.30	3.0
-	2.5	NS	3.3	0.30	3.2
12	-	NS	3.6	0.30	3.5
-	4	NS	3.8	0.30	3.7
10	-	NS	4.4	0.30	4.3
-	6	NS	4.6	0.30	4.5
8	-	-	-	0.30	5.6
-	10	-	-	0.30	5.9
6	-	-	-	0.43	7.0
-	16	-	-	0.43	7.3
4	-	-	-	0.43	8.2
-	25	-	-	0.43	8.7
2	35	-	-	0.43	10.0
1	-	-	-	-	-
-	50	-	-	-	-
1/0	-	-	-	-	-
2/0	70	-	-	-	-
3/0	-	-	-	-	-
-	95	-	-	-	-
4/0	-	-	-	-	-
-	120	-	-	-	-

Conducting metal

CEG

CEG

KEY

Conducting metals
 B Tin-plated copper
 B* Tin-plated copper (ø > 0.38 mm)
 C Nickel-plated copper
 D Silver-plated copper
 E Nickel
 F Bare copper
 F* Bare copper (ø > 0.38 mm)
 G Nickel-plated copper 27 %

AWM I A Internal wiring, not subject to mechanical abuse
 AWM I A/B Internal wiring
 AWM II A/B External or Internal wiring
 NS Not Specified
 VNS Voltage Not Specified

■: UL approved nominal cross-sections only.

* The diameter is provided for information purposes as it may vary depending on the stranding of the core. Only the average thickness of insulation should be taken into account.

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Style no.		5256		5196		5125	
Approval		250 °C – 600 V		250 °C – 600 V		250 °C – 600 V	
Nominal cross-section AWG	(mm²)	Average thickness of insulation (mm)	Nominal diameter* (mm)	Average thickness of insulation (mm)	Nominal diameter* (mm)	Average thickness of insulation (mm)	Nominal diameter* (mm)
30	0.05	-	-	-	-	-	-
28	0.09	-	-	-	-	-	-
26	0.13	-	-	-	-	-	-
24	0.22	0.28	1.6	0.64	2.5	-	-
22	0.34	0.28	1.7	0.64	2.6	-	-
-	0.5	0.28	2.0	0.64	2.8	-	-
20	0.6	0.28	2.1	0.64	2.8	-	-
-	0.75	0.28	2.2	0.64	3.0	-	-
18	0.93	0.28	2.3	0.64	3.1	0.69	3.2
-	1	0.28	2.4	0.64	3.2	0.69	3.3
16	1.34	0.38	2.8	0.64	3.3	0.69	3.4
-	1.5	0.38	2.9	0.64	3.4	0.69	3.6
14	-	0.38	3.2	0.64	3.7	0.69	3.9
-	2.5	0.38	3.4	0.64	3.9	0.69	4.0
12	-	0.38	3.7	0.64	4.2	0.69	4.3
-	4	0.38	3.9	0.64	4.5	0.69	4.6
10	-	0.38	4.5	0.64	5.2	0.69	5.4
-	6	0.38	4.7	0.64	5.6	0.69	5.6
8	-	0.38	5.8	0.64	6.3	-	-
-	10	0.38	6.1	0.64	6.6	-	-
6	-	0.51	7.2	0.89	8.2	-	-
-	16	0.51	7.5	0.89	8.5	-	-
4	-	0.51	8.4	0.89	9.4	-	-
-	25	0.51	8.9	0.89	9.9	-	-
2	35	0.51	10.2	0.89	11.2	-	-
1	-	-	-	1.14	12.4	-	-
-	50	-	-	1.14	12.9	-	-
1/0	-	-	-	1.14	13.5	-	-
2/0	70	-	-	1.14	14.8	-	-
3/0	-	-	-	1.14	16.1	-	-
-	95	-	-	1.14	16.9	-	-
4/0	-	-	-	1.14	17.8	-	-
-	120	-	-	1.14	18.4	-	-
Conducting metal		CEG		CEG		CEG	

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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® 350 °C Composite insulation UL and cUL approval



Characteristics General

- Maximum continuous operating temperature: +350 °C.
- Good resistance to thermal shocks and oxidization.

Electrical

- Rated voltage: as per style no. (see opposite table).
- Test voltage: as per style no.

Standard products

- Standard colours: grey, brown or natural.
- Stranding of conducting cores: contact us.

Approvals - standards

- UL approval as per standard UL 758 – File no.: E101965.
- cUL approval (CSA) as per standard C22.2 No. 210 - File no.: E101965.
- Nickel-plated copper complying with the 27% class as per standard ASTM B355.
- Nickel type 200 as per standard ASTM B160.
- "Horizontal flame test" as per UL approval.
- "FT2 flame rating" as per cUL approval.
- VW-1 approval for Style 5304.

Applications

- Cabling for industrial furnaces and air ovens.
 - Cabling for heating resistors, cartridges, bands and plates.
- Cabling for domestic or professional electrical appliances.

Options

- Other colours: contact us.
- Individual or general electrical shielding: contact us.

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UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION



- Nickel or nickel-plated copper core.
- Composite insulation: Mica tape(s) and/or fibreglass lapping + varnished fibreglass braid.

Style no.		5294		5285		5304-VW-1	
Approval		350 °C – 300 V		350 °C – 300 V		350 °C – 600 V	
Nominal cross-section AWG (mm²)		Average thickness of insulation (mm)	Nominal diameter* (mm)	Average thickness of insulation (mm)	Nominal diameter* (mm)	Average thickness of insulation (mm)	Nominal diameter* (mm)
30	0.05	-	-	-	-	-	-
28	0.09	-	-	-	-	-	-
26	0.13	-	-	-	-	-	-
24	0.22	0.46	2.2	1.14	2.9	0.66	2.5
22	0.34	0.46	2.4	1.14	3.0	0.66	2.6
-	0.5	0.46	2.5	1.14	3.2	0.66	2.8
20	0.6	0.46	2.6	1.14	3.3	0.66	2.9
-	0.75	0.46	2.8	1.14	3.4	0.66	3.0
18	0.93	0.46	2.8	1.14	3.5	0.66	3.1
-	1	0.46	2.9	1.14	3.6	0.66	3.2
16	1.34	0.46	3.1	1.14	3.8	0.66	3.4
-	1.5	0.46	3.2	1.14	3.9	0.66	3.5
14	-	0.46	3.5	1.14	4.1	0.66	3.8
-	2.5	0.46	3.7	1.14	4.3	0.66	3.9
12	-	0.46	4.0	1.14	4.6	0.66	4.3
-	4	0.46	4.2	1.14	4.9	0.66	4.6
10	-	0.46	4.9	1.14	6.0	0.66	5.5
-	6	-	-	-	-	-	-
8	-	-	-	-	-	-	-
-	10	-	-	-	-	-	-
6	-	-	-	-	-	-	-
-	16	-	-	-	-	-	-
4	-	-	-	-	-	-	-
-	25	-	-	-	-	-	-
2	35	-	-	-	-	-	-
1	-	-	-	-	-	-	-
-	50	-	-	-	-	-	-
1/0	-	-	-	-	-	-	-
2/0	70	-	-	-	-	-	-
3/0	-	-	-	-	-	-	-
-	95	-	-	-	-	-	-
4/0	-	-	-	-	-	-	-
-	120	-	-	-	-	-	-
Conducting metal		EG		EG		EG	

KEY

Conducting metals
B Tin-plated copper
B* Tin-plated copper (ø > 0.38 mm)
C Nickel-plated copper
D Silver-plated copper
E Nickel
F Bare copper
F* Bare copper (ø > 0.38 mm)
G Nickel-plated copper 27 %

AWM I A Internal wiring, not subject to mechanical abuse
AWM I A/B Internal wiring
AWM II A/B External or internal wiring

NS Not Specified
VNS Voltage Not Specified

■: UL approved nominal cross-sections only.

* The diameter is provided for information purposes as it may vary depending on the stranding of the core. Only the average thickness of insulation should be taken into account.

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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® 450 °C Composite insulation UL and cUL approval



Characteristics General

- Maximum continuous operating temperature: +450 °C.
- Good resistance to thermal shocks and oxidization.

Electrical

- Rated voltage: as per style no. (see opposite table).
- Test voltage: as per style no.

Standard products

- Standard colours: grey, brown or natural.
- Stranding of conducting cores: contact us.

Approvals - standards

- UL approval as per standard UL 758 – File no.: E101965.
- cUL approval (CSA) as per standard C22.2 No. 210 - File no.: E101965.
- Nickel-plated copper complying with the 27% class as per standard ASTM B355.
- Nickel type 200 as per standard ASTM B160.
 - "Horizontal flame test" as per UL approval.
 - "FT2 flame rating" as per cUL approval.

Applications

- Cabling for industrial furnaces and air ovens.
 - Cabling for heating resistors, cartridges, bands and plates.
- Cabling for domestic or professional electrical appliances.

Options

- Other colours: contact us.
- Individual or general electrical shielding: contact us.
- Multi-conductor cables (Styles no. 5128, 5107, 5283, 5335): contact us.
- Other style nos. available: style no. 5158.

UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Nickel or nickel-plated copper core.
- 2 • Composite insulation: Mica tape(s) and/or fibreglass lapping + varnished fibreglass braid.

Style no.		5168		5334		5128	
Approval		450 °C - 300 V		450 °C - 300 V		450 °C - 300 V	
Nominal cross-section AWG	(mm²)	Average thickness of insulation (mm)	Nominal diameter* (mm)	Average thickness of insulation (mm)	Nominal diameter* (mm)	Average thickness of insulation (mm)	Nominal diameter* (mm)
30	0.05	-	-	-	-	-	-
28	0.09	-	-	-	-	-	-
26	0.13	-	-	-	-	-	-
24	0.22	0.43	1.7	0.56	2.0	0.56	1.9
22	0.34	0.43	1.9	0.56	2.1	0.56	2.0
-	0.5	0.43	2.0	0.56	2.3	0.56	2.2
20	0.6	0.43	2.1	0.56	2.4	0.56	2.2
-	0.75	0.43	2.3	0.56	2.5	0.56	2.4
18	0.93	0.43	2.3	0.56	2.6	0.56	2.5
-	1	0.43	2.4	0.56	2.7	0.56	2.5
16	1.34	0.43	2.6	0.56	2.9	0.56	2.8
-	1.5	0.43	2.7	0.56	3.0	0.56	2.8
14	-	0.43	3.0	0.56	3.2	0.56	3.1
-	2.5	0.43	3.2	0.56	3.4	0.56	3.3
12	-	0.43	3.5	0.56	3.7	0.56	3.6
-	4	0.43	3.7	0.56	4.0	0.56	3.8
10	-	0.89	5.2	0.76	4.9	0.89	5.4
-	6	0.89	5.3	0.76	5.0	0.89	5.5
8	-	0.89	6.0	0.76	5.8	0.89	6.1
-	10	0.89	6.5	0.76	6.2	0.89	6.5
6	-	0.89	7.2	0.76	6.9	0.89	7.2
-	16	0.89	7.7	0.76	7.4	0.89	7.7
4	-	0.89	8.7	0.76	8.4	0.89	8.7
-	25	0.89	9.1	0.76	8.8	0.89	9.1
2	35	1.09	10.9	-	-	-	-
1	-	1.09	11.8	-	-	-	-
-	50	1.09	12.5	-	-	-	-
1/0	-	1.09	13.0	-	-	-	-
2/0	70	1.09	14.4	-	-	-	-
3/0	-	1.09	15.6	-	-	-	-
-	95	1.09	16.4	-	-	-	-
4/0	-	1.09	17.1	-	-	-	-
-	120	1.09	18.0	-	-	-	-
Conducting metal		EG		EG		EG	

KEY

Conducting metals
 B Tin-plated copper
 B* Tin-plated copper (ø > 0.38 mm)
 C Nickel-plated copper
 D Silver-plated copper
 E Nickel
 F Bare copper
 F* Bare copper (ø > 0.38 mm)
 G Nickel-plated copper 27 %

AWM I A Internal wiring, not subject to mechanical abuse
 AWM I A/B Internal wiring
 AWM II A/B External or Internal wiring

NS Not Specified
 VNS Voltage Not Specified

■: UL approved nominal cross-sections only.

* The diameter is provided for information purposes as it may vary depending on the stranding of the core. Only the average thickness of insulation should be taken into account.

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Style no.		5335		5107		5138	
Approval		450 °C – 600 V		450 °C – 600 V		450 °C – 600 V	
Nominal cross-section AWG	(mm ²)	Average thickness of insulation (mm)	Nominal diameter* (mm)	Average thickness of insulation (mm)	Nominal diameter* (mm)	Average thickness of insulation (mm)	Nominal diameter* (mm)
30	0.05	-	-	-	-	-	-
28	0.09	-	-	-	-	-	-
26	0.13	-	-	0.81	2.3	-	-
24	0.22	-	-	0.81	2.4	-	-
22	0.34	0.71	2.4	0.81	2.6	-	-
-	0.5	0.71	2.6	0.81	2.7	-	-
20	0.6	0.71	2.6	0.81	2.8	-	-
-	0.75	0.71	2.8	0.81	3.0	-	-
18	0.93	0.71	2.9	0.81	3.0	1.57	4.6
-	1	0.71	2.9	0.81	3.1	1.57	4.7
16	1.34	0.71	3.2	0.81	3.3	1.57	4.9
-	1.5	0.71	3.2	0.81	3.4	1.57	5.0
14	-	0.71	3.5	0.81	3.7	1.57	5.2
-	2.5	0.71	3.7	0.81	3.9	1.57	5.4
12	-	0.71	4.0	0.81	4.2	1.57	5.7
-	4	0.71	4.2	0.81	4.4	1.57	6.0
10	-	0.94	5.3	1.14	5.8	1.57	6.6
-	6	0.94	5.5	1.14	6.0	1.57	6.8
8	-	0.94	6.1	1.14	6.6	2.08	8.9
-	10	0.94	6.4	1.14	7.0	2.08	9.1
6	-	0.94	7.2	1.14	7.7	2.08	9.9
-	16	0.94	7.6	1.14	8.1	2.08	10.3
4	-	0.94	8.7	1.14	9.2	2.08	11.4
-	25	0.94	9.0	1.14	9.6	2.08	11.7
2	35	1.19	10.8	1.40	11.4	2.08	13.0
1	-	1.19	11.7	1.40	12.3	-	-
-	50	1.19	12.5	1.40	13.0	-	-
1/0	-	1.19	12.9	1.40	13.5	-	-
2/0	70	1.19	14.3	1.40	14.9	-	-
3/0	-	1.19	15.6	1.40	16.1	-	-
-	95	1.19	16.3	1.40	16.9	-	-
4/0	-	1.19	17.1	1.40	17.6	-	-
-	120	1.19	17.9	1.40	18.5	-	-
Conducting metal		EG		EG		G	

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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® KVS and 2KVS -100 °C to +350 °C

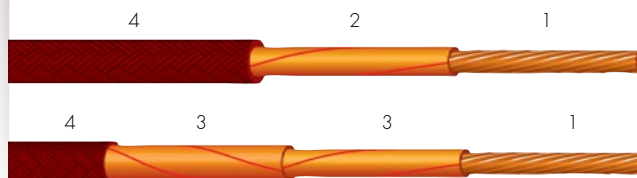
Applications

- Cabling for heating resistors, cartridges, bands and plates.
- All cabling requiring enhanced chemical resistance and resistance to radiations (chemical, nuclear industry, etc.).

Options

- Nickel-plated copper core: ref. CNKVS and CN2KVS.
- Silver-plated copper core: ref. AKVS and A2KVS.
- Pure nickel core (not described in IEC 60228): ref. NKVS or N2KVS.
- Other nominal cross-sections: contact us.
- Other nominal stranding: contact us.
- Other options: contact us.

UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Flexible bare copper core - class 5 as per IEC 60228.
- 2 • Polyimide tape.
- 3 • Two heat-sealed crossed polyimide tapes.
- 4 • Varnished fibreglass braid.

Characteristics General

- Continuous operating temperatures: -100 °C to +350 °C.
- Enhanced resistance to moisture for ref. 2KVS.
- Good resistance to common chemical agents.
- Excellent resistance of polyimide material to radiations: 1.10^9 rad.

Electrical

- Rated voltage: 300/500 V.
- Test voltage: 2000 V.
- Enhanced dielectric strength for ref. 2KVS.

Standard products

- All solid colours.
- All colours with coloured spiral stripe(s).

Conducting core

Nominal cross-section (mm ²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)
0.22*	7 x 0.20	89.9
0.34*	7 x 0.25	57.5
0.5*	7 x 0.30	39.6
0.6**	19 x 0.20	32.8
0.75	24 x 0.20	26.0
1	32 x 0.20	19.5
1.5	30 x 0.25	13.3
2.5	50 x 0.25	7.98
4	56 x 0.30	4.95
6	84 x 0.30	3.30
10	80 x 0.40	1.91
16	126 x 0.40	1.21
25	196 x 0.40	0.780
35	276 x 0.40	0.554
50	396 x 0.40	0.386
70	360 x 0.50	0.272
95	485 x 0.50	0.206

INSULATED WIRE OR CABLE

Nominal diameter (mm)	Approximate linear weight (kg/km)	
	KVS	2KVS
1	1.2	3.1
1.1	1.3	5.7
1.2	1.4	6.3
1.3	1.5	7.1
1.4	1.6	8.5
1.5	1.7	10.8
1.9	2.1	15.3
2.4	2.6	24.1
3.1	3.3	38.4
3.7	3.9	56.3
5	5.2	106
	6.3	192
	7.8	288
	8.8	385
	10.6	556
	12.8	785
	14.7	1032

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* Cross-sections described as per NF C 32-018 class B.

** Cross-section described as per NF C 32-018 class C.

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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® CN2K and CN4K -190 °C to +250 °C



Approvals - standards

- Nickel-plated copper complying with the 2% class as per standard ASTM B355.
- VERITAS approval certificates No. 153624.

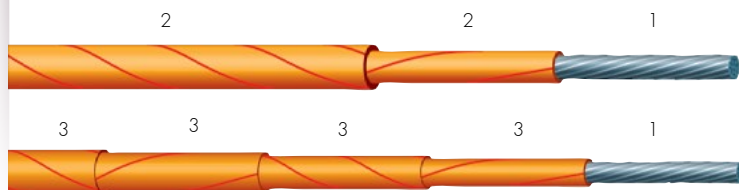
Applications

- Cabling for heating resistors, cartridges, bands and plates.
- All cabling requiring enhanced chemical resistance and resistance to radiations (chemical, nuclear industry, etc.).

Options

- Silver-plated copper core: ref. A2K and A4K.
- Pure nickel core (not described in IEC 60228 and NF C 32-018): ref. N2K and N4K.
- Assembly of unipolar cables ref. CN2K under polyimide sheath: ref. M2K-CN2K.
- Other nominal cross-sections: contact us.
- Other nominal stranding: contact us.
- Other options: contact us.

UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Nickel-plated copper core.
- 2 • Two heat-sealed crossed polyimide tapes.
- 3 • Four heat-sealed crossed polyimide tapes.

Characteristics General

- Continuous operating temperatures: -190 °C to +200 °C - Peaks at +250 °C.
- Good resistance to moisture and common chemical agents.
- Excellent resistance of polyimide material to radiations: 1.10^9 rad.

Electrical

- Rated voltage: 300/500 V.
- Test voltage: 2000 V.
- Enhanced dielectric strength for ref. CN4K.

Standard products

- Single colour: amber brown.

Conducting core

Nominal cross-section (1) (mm²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)
0.14**	7 x 0.16	152
0.22*	7 x 0.20	99.4
0.25**	8 x 0.20	87.2
0.34*	7 x 0.25	63.6
0.4*	19 x 0.16	58.0
0.5*	7 x 0.30	43.8
0.6*	19 x 0.20	36.3
0.75	24 x 0.20	28.7
0.93*	19 x 0.25	23.2
1	32 x 0.20	21.5
1.34*	19 x 0.30	16.1
1.5	30 x 0.25	14.7
1.91*	27 x 0.30	11.3
2.5	50 x 0.25	8.21
4	56 x 0.30	5.09
6	84 x 0.30	3.39
10	80 x 0.40	1.95
16	126 x 0.40	1.24
25	196 x 0.40	0.795
35	276 x 0.40	0.565
50	396 x 0.40	0.394

INSULATED WIRE OR CABLE

Nominal diameter (mm)		Approximate linear weight (kg/km)
CN2K	CN4K	
0.8	1.1	1.9
0.9	1.2	2.8
1.0	1.3	2.9
1.0	1.3	3.8
1.1	1.4	4.2
1.2	1.5	5.3
1.3	1.6	6.3
1.5	1.8	7.7
1.6	1.9	9.5
1.6	1.9	10.1
1.8	2.1	13.4
1.9	2.2	14.6
2.2	2.5	23.8
2.3	2.6	24.7
2.9	3.2	37.8
3.5	3.8	56.1
4.7	5.0	90.8
	6.0	157
	7.4	254
	8.8	353
	10.6	512

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LES CABLES DE L'EXTREME

(1) Nominal cross-sections described as per IEC 60228 except:

* Nominal cross-sections described as per NF C 32-018.

** Nominal cross-sections not described in IEC 60228 and NF C 32-018.

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MULTI-CONDUCTOR WIRES AND CABLES WITH COMPOSITE INSULATION

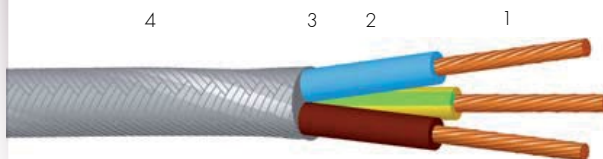
FT No.	PRODUCT REFERENCE	APPROVAL	PAGE
3201	SILICABLE MV-CS		30
3202	SILICABLE MV-VS		32
3203	SILICABLE MA-CNVS		34
3204	SILICABLE BM-NVS		36
3205	SILICABLE MA-CNVS		38
3206	SILICABLE MA-NVAS		40

HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® MV-CS

-60 °C to +200 °C

MULTI-CONDUCTOR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Flexible bare copper core - class 5 as per IEC 60228.
- 2 • Silicone rubber.
- 3 • Fillers optional, not shown.
- 4 • Silicone-coated fiberglass braid.

Approvals - standards

- Halogen-free: IEC 60754-1 / EN 50267-2-1.
 - Low corrosivity of gas emissions: IEC 60754-2 / EN 50267-2-2.
 - Fire retardant: NF C 32-070 test C1.
- Resistance to vertical flame propagation for an insulated cable: IEC 60332-1-2 / EN 50265-2-1 / NF C 32-070 test C2.

Applications

- All cabling in hot atmospheres up to 200 °C.
 - Cabling in the metallurgical industry, glassworks, etc.
- Cabling for furnaces, ovens, machines for thermoplastics and rubber, welding stations, etc. Lights, spotlights, etc.

Options

- Other nominal cross-sections: contact us.
- Other numbers of conductors (up to 37): contact us.
 - Tin-plated copper cores: ref. MV-ECS.
- Nickel-plated copper cores: ref. MV-CNCS.
 - Outer flexible armour:
 - > Galvanised steel braid: ref. BGMV-CS.
 - > Stainless steel braid: ref. BIMV-CS.
 - Reinforced outer braid: ref. MA-CS.
 - Electrical shielding:
 - > Tin-plated copper braid: ref. MVBE-ECS.
- > Aluminium tape + continuity wire: ref. MVBAL-ECS.
 - Other options and/or combinations of the options outlined above: contact us.

Characteristics

General

- Continuous operating temperatures: -60 °C to +200 °C.
- Good resistance to thermal shock.
- Excellent ageing.

Electrical

- Rated voltage: up to 600/1000 V.
- Test voltage: up to 3000 V.

Standard products

- Standard conductor colours: see table below.
- Standard outer braid colour: grey.
- Some cables may include a fiberglass tape or other separating tape under the outer braid.

Standard conductor colours

Number of conductors	With an earth wire	Without an earth wire
2	-	Blue - Brown
3	Yellow/Green - Blue - Brown	Brown - Black - Grey (or Blue)
4	Yellow/Green - Brown - Black - Grey (or Blue)	Blue - Brown - Black - Grey
5	Yellow/Green - Blue - Brown - Black - Grey	Blue - Brown - Black - Grey - Black
≥6	Yellow/Green - Grey numbered	Grey numbered

Identification

Multi-conductor cables without an earth wire are identified as follows:

< Number of conductors > X < Cross-section > mm² (example: 3 X 1.5 mm²).

Multi-conductor cables with an earth wire are identified by the symbol G in the place of the X (example 3 G 1.5 mm²).

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Flexible core – Class 5 as per IEC 60228

INSULATED CONDUCTORS

SHEATHED CABLE

Nominal cross-section (mm ²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Nominal thickness of insulation (mm)	Nominal diameter of the conductor (mm)	Nominal diameter of the cable (mm)	Approximate linear weight (kg/km)
2 x 0.5	16 x 0.20	39.0	0.6	2.1	4.7	22.1
3 x 0.5	16 x 0.20	39.0	0.6	2.1	5.0	31.7
4 x 0.5	16 x 0.20	39.0	0.6	2.1	5.6	40.1
5 x 0.5	16 x 0.20	39.0	0.6	2.1	6.2	51.2
7 x 0.5	16 x 0.20	39.0	0.6	2.1	6.8	71.7
2 x 0.75	24 x 0.20	26.0	0.6	2.4	5.2	36.9
3 x 0.75	24 x 0.20	26.0	0.6	2.4	5.8	51.6
4 x 0.75	24 x 0.20	26.0	0.6	2.4	6.4	68.8
5 x 0.75	24 x 0.20	26.0	0.6	2.4	7.1	86.0
7 x 0.75	24 x 0.20	26.0	0.6	2.4	7.8	91.6
2 x 1	32 x 0.20	19.5	0.6	2.5	5.5	33.3
3 x 1	32 x 0.20	19.5	0.6	2.5	6.0	48.7
4 x 1	32 x 0.20	19.5	0.6	2.5	6.6	51.6
5 x 1	32 x 0.20	19.5	0.6	2.5	7.4	64.4
7 x 1	32 x 0.20	19.5	0.6	2.5	8.2	106.9
12 x 1	32 x 0.20	19.5	0.6	2.5	11.0	187
19 x 1	32 x 0.20	19.5	0.6	2.5	13.2	296
24 x 1	32 x 0.20	19.5	0.6	2.5	15.8	374
27 x 1	32 x 0.20	19.5	0.6	2.5	16.2	421
37 x 1	32 x 0.20	19.5	0.6	2.5	18.2	578
2 x 1.5	30 x 0.25	13.3	0.6	2.8	6.2	55.8
3 x 1.5	30 x 0.25	13.3	0.6	2.8	6.6	64.4
4 x 1.5	30 x 0.25	13.3	0.6	2.8	7.3	84.3
5 x 1.5	30 x 0.25	13.3	0.6	2.8	8.2	105
7 x 1.5	30 x 0.25	13.3	0.6	2.8	9.0	142
12 x 1.5	30 x 0.25	13.3	0.6	2.8	12.2	241
19 x 1.5	30 x 0.25	13.3	0.6	2.8	14.6	369
24 x 1.5	30 x 0.25	13.3	0.6	2.8	17.5	466
27 x 1.5	30 x 0.25	13.3	0.6	2.8	18.0	525
37 x 1.5	30 x 0.25	13.3	0.6	2.8	20.4	719
2 x 2.5	50 x 0.25	7.98	0.7	3.4	7.3	79.6
3 x 2.5	50 x 0.25	7.98	0.7	3.4	7.8	109.7
4 x 2.5	50 x 0.25	7.98	0.7	3.4	8.8	129
5 x 2.5	50 x 0.25	7.98	0.7	3.4	9.7	161
7 x 2.5	50 x 0.25	7.98	0.7	3.4	10.8	225
12 x 2.5	50 x 0.25	7.98	0.7	3.4	14.8	385
2 x 4	56 x 0.30	4.95	0.8	4.2	8.9	115
3 x 4	56 x 0.30	4.95	0.8	4.2	9.5	165
4 x 4	56 x 0.30	4.95	0.8	4.2	10.6	205
5 x 4	56 x 0.30	4.95	0.8	4.2	11.9	248
7 x 4	56 x 0.30	4.95	0.8	4.2	13.1	360
2 x 6	84 x 0.30	3.30	0.8	4.8	10.2	151
3 x 6	84 x 0.30	3.30	0.8	4.8	11.0	227
4 x 6	84 x 0.30	3.30	0.8	4.8	12.2	303
5 x 6	84 x 0.30	3.30	0.8	4.8	13.8	364
2 x 10	80 x 0.40	1.91	1.0	6.4	13.5	272
3 x 10	80 x 0.40	1.91	1.0	6.4	14.5	408
4 x 10	80 x 0.40	1.91	1.0	6.4	16.1	544
5 x 10	80 x 0.40	1.91	1.0	6.4	18.0	680
2 x 16	126 x 0.40	1.21	1.2	7.8	15.5	401
3 x 16	126 x 0.40	1.21	1.2	7.8	15.6	602
4 x 16	126 x 0.40	1.21	1.2	7.8	18.6	803
5 x 16	126 x 0.40	1.21	1.2	7.8	20.8	1003
2 x 25	196 x 0.40	0.780	1.4	9.6	19.9	627
3 x 25	196 x 0.40	0.780	1.4	9.6	21.3	941
4 x 25	196 x 0.40	0.780	1.4	9.6	23.9	1254
5 x 25	196 x 0.40	0.780	1.4	9.6	26.7	1568

HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® MV-VS

-60 °C to +280 °C



Approvals - standards

- Halogen-free: IEC 60754-1 / EN 50267-2-1.
 - Fire retardant: NF C 32-070 test C1.
- Resistance to vertical flame propagation for an insulated cable: IEC 60332-1-2 / EN 50265-2-1 NF C 32-070 test C2.
 - VERITAS approval certificate: > No. BV.153552.
 - > No. BV.256096 - 2 hours at 400°C.

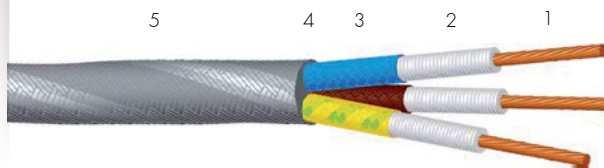
Applications

- All cabling in hot atmospheres up to 280 °C.
 - Cabling in the metallurgical industry, glassworks, etc.
- Cabling for industrial furnaces and air ovens, machines for thermoplastics or rubber, welding stations, etc.
- Cabling for heating resistors, cartridges, bands and plates.

Options

- Other nominal cross-sections: contact us.
- Other numbers of conductors (up to 37): contact us.
 - Nickel-plated copper cores: ref. MV-CNVS.
 - Outer flexible armour:
 - > Galvanised steel braid: ref. BGMV-VS.
 - > Stainless steel braid: ref. BIMV-VS.
 - Reinforced outer braid: ref. MA-VS.
 - Electrical shielding:
 - > Tin-plated copper braid: ref. MVBE-VS.
 - > Aluminium tape + continuity wire: ref. MVBAL-VS.
 - Other options and/or combinations of the options outlined above: contact us.

MULTI-CONDUCTOR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Flexible bare copper core - class 5 as per IEC 60228.
- 2 • Silicone impregnated fiberglass lappings.
- 3 • Silicone-coated fiberglass braid.
- 4 • Fillers optional, not shown.
- 5 • Silicone-coated fiberglass braid.

Characteristics

General

- Continuous operating temperatures: -60 °C to +280 °C.
- Good resistance to thermal shock.
- Excellent ageing.

Electrical

- Rated voltage: 300/500 V.
- Test voltage: 2000 V.

Standard products

- Standard conductor colours: see table below.
- Standard outer braid colour: grey.
- Some cables may include a fiberglass tape or other separating tape under the outer braid.

Standard conductor colours

Number of conductors	With an earth wire	Without an earth wire
2	-	Blue - Brown
3	Yellow/Green - Blue - Brown	Brown - Black - Grey (or Blue)
4	Yellow/Green - Brown - Black - Grey (or Blue)	Blue - Brown - Black - Grey
5	Yellow/Green - Blue - Brown - Black - Grey (or Red)	Blue - Brown - Black - Grey - Black
≥6	Yellow/Green - Black or White non-numbered	Black or White non-numbered

Identification

Multi-conductor cables without an earth wire are identified as follows:

< Number of conductors > X < Cross-section > mm² (example: 3 X 1.5 mm²).

Multi-conductor cables with an earth wire are identified by the symbol G in the place of the X (example 3 G 1.5 mm²).

For this product, please contact:

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For an optimum use of the cables produced by our company, we recommend testing in real conditions. Our sales department is available for a possible provision of samples, and/or for the conditions of a complete study in our laboratories.

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Flexible core – Class 5 as per IEC 60228

INSULATED CONDUCTORS

SHEATHED CABLE

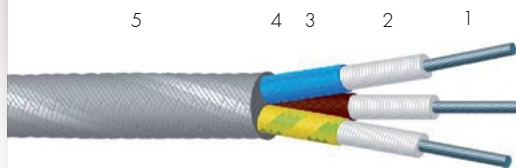
Nominal cross-section (mm ²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Nominal thickness of insulation (mm)	Nominal diameter of the conductor (mm)	Nominal diameter of the cable (mm)	Approximate linear weight (kg/km)
2 x 0.5	16 x 0.20	39.0	0.6	2.1	4.9	23.8
3 x 0.5	16 x 0.20	39.0	0.6	2.1	5.1	34.6
4 x 0.5	16 x 0.20	39.0	0.6	2.1	5.7	45.9
5 x 0.5	16 x 0.20	39.0	0.6	2.1	6.3	57.4
7 x 0.5	16 x 0.20	39.0	0.6	2.1	6.9	80.4
2 x 0.75	24 x 0.20	26.0	0.6	2.4	5.5	29.5
3 x 0.75	24 x 0.20	26.0	0.6	2.4	5.8	43.4
4 x 0.75	24 x 0.20	26.0	0.6	2.4	6.4	56.5
5 x 0.75	24 x 0.20	26.0	0.6	2.4	7.1	72.5
7 x 0.75	24 x 0.20	26.0	0.6	2.4	7.8	101
2 x 1	32 x 0.20	19.5	0.6	2.5	5.6	41.5
3 x 1	32 x 0.20	19.5	0.6	2.5	6.0	51.3
4 x 1	32 x 0.20	19.5	0.6	2.5	6.6	67.0
5 x 1	32 x 0.20	19.5	0.6	2.5	7.3	85.7
7 x 1	32 x 0.20	19.5	0.6	2.5	8.1	114
12 x 1	32 x 0.20	19.5	0.6	2.5	11.0	194
19 x 1	32 x 0.20	19.5	0.6	2.5	13.1	296
24 x 1	32 x 0.20	19.5	0.6	2.5	15.6	374
27 x 1	32 x 0.20	19.5	0.6	2.5	16.0	420
37 x 1	32 x 0.20	19.5	0.6	2.5	18.2	575
2 x 1.5	30 x 0.25	13.3	0.6	2.8	6.4	51.8
3 x 1.5	30 x 0.25	13.3	0.6	2.8	6.6	70.6
4 x 1.5	30 x 0.25	13.3	0.6	2.8	7.4	87.3
5 x 1.5	30 x 0.25	13.3	0.6	2.8	8.2	114
7 x 1.5	30 x 0.25	13.3	0.6	2.8	9.0	149
12 x 1.5	30 x 0.25	13.3	0.6	2.8	12.2	255
19 x 1.5	30 x 0.25	13.3	0.6	2.8	14.6	404
24 x 1.5	30 x 0.25	13.3	0.6	2.8	17.4	510
27 x 1.5	30 x 0.25	13.3	0.6	2.8	17.8	574
37 x 1.5	30 x 0.25	13.3	0.6	2.8	20.3	787
2 x 2.5	50 x 0.25	7.98	0.6	3.2	7.0	67
3 x 2.5	50 x 0.25	7.98	0.6	3.2	7.5	98.8
4 x 2.5	50 x 0.25	7.98	0.6	3.2	8.3	131
5 x 2.5	50 x 0.25	7.98	0.6	3.2	9.3	168
7 x 2.5	50 x 0.25	7.98	0.6	3.2	10.4	223
12 x 2.5	50 x 0.25	7.98	0.6	3.2	20.4	380
2 x 4	56 x 0.30	4.95	0.8	4.0	8.6	113
3 x 4	56 x 0.30	4.95	0.8	4.0	9.2	158
4 x 4	56 x 0.30	4.95	0.8	4.0	10.3	207
5 x 4	56 x 0.30	4.95	0.8	4.0	11.4	268
7 x 4	56 x 0.30	4.95	0.8	4.0	12.6	356
2 x 6	84 x 0.30	3.30	0.8	4.6	9.8	160
3 x 6	84 x 0.30	3.30	0.8	4.6	10.5	223
4 x 6	84 x 0.30	3.30	0.8	4.6	12	298
5 x 6	84 x 0.30	3.30	0.8	4.6	13.1	372
2 x 10	80 x 0.40	1.91	1.2	6.6	13.8	270
3 x 10	80 x 0.40	1.91	1.2	6.6	14.8	375
4 x 10	80 x 0.40	1.91	1.2	6.6	16.5	496
2 x 16	126 x 0.40	1.21	1.2	7.9	16.4	448
3 x 16	126 x 0.40	1.21	1.2	7.9	17.6	625
4 x 16	126 x 0.40	1.21	1.2	7.9	19.8	825
2 x 25	196 x 0.40	0.780	1.5	10.0	20.7	708
3 x 25	196 x 0.40	0.780	1.5	10.0	22.2	1068
4 x 25	196 x 0.40	0.780	1.5	10.0	24.8	1312
2 x 35	276 x 0.40	0.554	1.8	12.0	25.2	977
3 x 35	276 x 0.40	0.554	1.8	12.0	26.8	1363
4 x 35	276 x 0.40	0.554	1.8	12.0	29.8	1799

HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® MA-CNVS

-60 °C to +350 °C

MULTI-CONDUCTOR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Stranded nickel-plated copper core.
- 2 • Silicone impregnated fibreglass lappings.
- 3 • Silicone-coated fibreglass braid.
- 4 • Fillers optional, not shown.
- 5 • Silicone-coated mineral fibre braid.

Approvals - standards

- Nickel-plated copper complying with the 2% class as per standard ASTM B355.
- Fire retardant: NF C 32-070 test C1.
- Resistance to vertical flame propagation for an insulated cable: IEC 60332-1-2 / EN 50265-2-1 NF C 32-070 test C2.

Applications

- All cabling in hot atmospheres up to +350 °C.
 - Cabling in the metallurgical industry, glassworks, etc.
- Cabling for industrial furnaces and air ovens, machines for thermoplastics or rubber, welding stations, etc.
- Cabling for heating resistors, cartridges, bands and plates.

Options

- Other nominal cross-sections: contact us.
- Class 5 flexible cores as per IEC 60228: contact us.
- Other numbers of conductors (up to 37): contact us.
- Outer flexible armour:
 - > Galvanised steel braid: ref. BGMA-CNVS.
 - > Stainless steel braid: ref. BIMA-CNVS.
 - Electrical shielding:
- > Nickel-plated copper braid: ref. MABCN-CNVS.
- Other options and/or combinations of the options outlined above: contact us.

Characteristics General

- Continuous operating temperatures: -60 °C to +350 °C.
- Good resistance to thermal shock.
- Excellent ageing.

Electrical

- Rated voltage: 300/500 V.
- Test voltage: 2000 V.

Standard products

- Standard conductor colours: see table below.
- Standard outer braid colour: grey.
- Some cables may include a fibreglass tape or other separating tape under the outer braid.

Standard conductor colours

Number of conductors	With an earth wire	Without an earth wire
2	-	Blue – Brown
3	Yellow/Green – Blue – Brown	Brown – Black – Grey (or Blue)
4	Yellow/Green – Brown – Black – Grey (or Blue)	Blue – Brown – Black – Grey
5	Yellow/Green – Blue – Brown – Black – Grey (or Red)	Blue – Brown – Black – Grey – Black (or Red)
≥6	Yellow/Green – Black or White non-numbered	Black or White non-numbered

• Identification

Multi-conductor cables without an earth wire are identified as follows:

< Number of conductors > X < Cross-section > mm² (example: 3 X 1.5 mm²).

Multi-conductor cables with an earth wire are identified by the symbol G in the place of the X (example 3 G 1.5 mm²).

For this product, please contact:

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For an optimum use of the cables produced by our company, we recommend testing in real conditions. Our sales department is available for a possible provision of samples, and/or for the conditions of a complete study in our laboratories.

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Conducting core

INSULATED CONDUCTORS

SHEATHED CABLE

Nominal cross-section (mm ²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Nominal thickness of insulation (mm)	Nominal diameter of the conductor (mm)	Nominal diameter of the cable (mm)	Approximate linear weight (kg/km)
2 x 0.5	7 x 0.30	36.7	0.6	2.1	5.6	27.4
3 x 0.5	7 x 0.30	36.7	0.6	2.1	5.9	39.8
4 x 0.5	7 x 0.30	36.7	0.6	2.1	6.5	52.8
5 x 0.5	7 x 0.30	36.7	0.6	2.1	7.1	66.0
7 x 0.5	7 x 0.30	36.7	0.6	2.1	7.7	92.5
2 x 0.75	11 x 0.30	24.8	0.6	2.4	6.3	33.9
3 x 0.75	11 x 0.30	24.8	0.6	2.4	6.6	49.9
4 x 0.75	11 x 0.30	24.8	0.6	2.4	7.2	64.9
5 x 0.75	11 x 0.30	24.8	0.6	2.4	7.9	83.4
7 x 0.75	11 x 0.30	24.8	0.6	2.4	8.6	116
2 x 1	14 x 0.30	18.2	0.6	2.5	6.4	47.7
3 x 1	14 x 0.30	18.2	0.6	2.5	6.8	59.0
4 x 1	14 x 0.30	18.2	0.6	2.5	7.4	77.0
5 x 1	14 x 0.30	18.2	0.6	2.5	8.1	98.5
7 x 1	14 x 0.30	18.2	0.6	2.5	8.9	131
12 x 1	14 x 0.30	18.2	0.6	2.5	11.8	223
19 x 1	14 x 0.30	18.2	0.6	2.5	13.9	340
24 x 1	14 x 0.30	18.2	0.6	2.5	16.4	430
27 x 1	14 x 0.30	18.2	0.6	2.5	16.8	483
37 x 1	14 x 0.30	18.2	0.6	2.5	19.0	661
2 x 1.5	21 x 0.30	12.2	0.6	2.8	7.2	59.6
3 x 1.5	21 x 0.30	12.2	0.6	2.8	7.4	81.2
4 x 1.5	21 x 0.30	12.2	0.6	2.8	8.2	100
5 x 1.5	21 x 0.30	12.2	0.6	2.8	9.0	131
7 x 1.5	21 x 0.30	12.2	0.6	2.8	9.8	171
12 x 1.5	21 x 0.30	12.2	0.6	2.8	13.0	293
19 x 1.5	21 x 0.30	12.2	0.6	2.8	15.4	465
24 x 1.5	21 x 0.30	12.2	0.6	2.8	18.2	586
27 x 1.5	21 x 0.30	12.2	0.6	2.8	18.6	660
37 x 1.5	21 x 0.30	12.2	0.6	2.8	21.1	905
2 x 2.5	35 x 0.30	7.56	0.6	3.2	7.8	77.0
3 x 2.5	35 x 0.30	7.56	0.6	3.2	8.3	113
4 x 2.5	35 x 0.30	7.56	0.6	3.2	9.1	150
5 x 2.5	35 x 0.30	7.56	0.6	3.2	10.1	193
7 x 2.5	35 x 0.30	7.56	0.6	3.2	11.2	256
12 x 2.5	35 x 0.30	7.56	0.6	3.2	21.2	437
2 x 4	56 x 0.30	4.70	0.8	4.0	9.4	130
3 x 4	56 x 0.30	4.70	0.8	4.0	10.0	182
4 x 4	56 x 0.30	4.70	0.8	4.0	11.1	238
5 x 4	56 x 0.30	4.70	0.8	4.0	12.2	308
7 x 4	56 x 0.30	4.70	0.8	4.0	13.4	409
2 x 6	84 x 0.30	3.11	0.8	4.6	10.6	184
3 x 6	84 x 0.30	3.11	0.8	4.6	11.3	256
4 x 6	84 x 0.30	3.11	0.8	4.6	12.8	343
5 x 6	84 x 0.30	3.11	0.8	4.6	13.9	428
2 x 10	80 x 0.40	1.84	1.2	6.6	14.6	310
3 x 10	80 x 0.40	1.84	1.2	6.6	15.4	431
4 x 10	80 x 0.40	1.84	1.2	6.6	17.5	570

HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® BM-NVS

-60 °C to +350 °C



Approvals - standards

- Nickel type 200, as per standards ASTM B160, DIN 17753 and DIN 17740.
- Halogen-free: IEC 60754-1 / EN 50267-2-1.
 - Resistance to vertical flame propagation for an insulated cable: IEC 60332-1-2 / EN 50265-2-1 / NF C 32-070 test C2.
- VERITAS approval certificate No. BV.153552.

Applications

- Cabling for heating resistors, cartridges, bands and plates.

Options

- Nickel-plate copper earth wire core: Ref. BM-(NVS+CNVS).
- Class 5 flexible cores as per IEC 60228: contact us.
- Other nominal cross-sections: contact us.
- Other numbers of conductors: contact us.
- Cable without an earth wire: contact us.
 - Other options and/or combinations of the options outlined above: contact us.

MULTI-CONDUCTOR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Stranded nickel core
- 2 • Silicone impregnated fibreglass lappings.
- 3 • Silicone-coated fibreglass braid.
- 4 • Galvanised steel braid.

Characteristics General

- Continuous operating temperatures: -60 °C to +350 °C.
- Good resistance to thermal shocks and oxidization of core.
- Excellent ageing.

Electrical

- Rated voltage: 300/500 V.
- Test voltage: 2000 V.

Standard products

- Standard conductor colours: see table below.

Number	Colours
3	Yellow/Green – Blue – Brown
4	Yellow/Green – Brown – Black – Blue
5	Yellow/Green – Blue – Brown – Black – Grey

- Outer braid with or without coloured spiral stripe.
- Some cables may include a fibreglass tape or other separating tape under the outer braid.

For this product, please contact:

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Conducting core

INSULATED CONDUCTORS

SHEATHED CABLE

Nominal cross-section (mm ²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Nominal thickness of insulation (mm)	Nominal diameter of the conductor (mm)	Nominal diameter of the cable (mm)	Approximate linear weight (kg/km)
3 G 0.5	7 x 0.30	229	0.6	2.1	5.5	63.8
4 G 0.5	7 x 0.30	229	0.6	2.1	6.1	82.2
5 G 0.5	7 x 0.30	229	0.6	2.1	6.7	97.0
3 G 0.75	11 x 0.30	156	0.6	2.4	6.2	68.5
4 G 0.75	11 x 0.30	156	0.6	2.4	6.8	87.9
5 G 0.75	11 x 0.30	156	0.6	2.4	7.3	104
3 G 1	14 x 0.30	115	0.6	2.5	6.4	80.6
4 G 1	14 x 0.30	115	0.6	2.5	6.8	97.7
5 G 1	14 x 0.30	115	0.6	2.5	7.8	115
3 G 1.5	21 x 0.30	77.2	0.6	2.8	7.0	95.7
4 G 1.5	21 x 0.30	77.2	0.6	2.8	7.7	117
5 G 1.5	21 x 0.30	77.2	0.6	2.8	8.6	153
3 G 2.5	35 x 0.30	47.2	0.6	3.2	7.9	139
4 G 2.5	35 x 0.30	47.2	0.6	3.2	8.7	168
5 G 2.5	35 x 0.30	47.2	0.6	3.2	9.7	206
3 G 4	56 x 0.30	31.5	0.8	4.3	9.6	219
4 G 4	56 x 0.30	31.5	0.8	4.3	10.6	267
5 G 4	56 x 0.30	31.5	0.8	4.3	12.4	318
3 G 6	84 x 0.30	21.0	0.8	4.6	11.5	249
4 G 6	84 x 0.30	21.0	0.8	4.6	12.4	334
5 G 6	84 x 0.30	21.0	0.8	4.6	13.6	412
3 G 10	140 x 0.30	12.1	1.2	6.6	15.8	512
4 G 10	140 x 0.30	12.1	1.2	6.6	17.6	619

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For an optimum use of the cables produced by our company, we recommend testing in real conditions. Our sales department is available for a possible provision of samples, and/or for the conditions of a complete study in our laboratories.

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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® MA-CNVAS

-60 °C to +400 °C

Approvals - standards

- Nickel-plated copper complying with the 2% class as per standard ASTM B355.
- Halogen-free: IEC 60754-1 / EN 50267-2-1.
 - Fire retardant: NF C 32-070 test C1.
 - Resistance to vertical flame propagation for an insulated cable: IEC 60332-1-2 / EN 50265-2-1 / NF C 32-070 test C2.

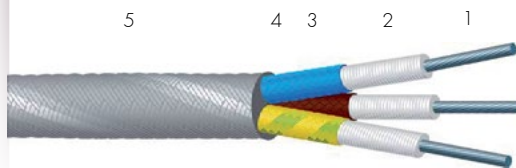
Applications

- All cabling in hot atmospheres up to 400 °C.
- Cabling in the metallurgical industry, glassworks, etc.
- Cabling for industrial furnaces and air ovens, machines for thermoplastics or rubber, welding stations, etc.
 - Cabling for heating resistors, cartridges, bands and plates.

Options

- Other nominal cross-sections and flexibility classes: contact us.
- Other numbers of conductors: contact us.
 - Bare copper cores: ref. MA-VAS.
 - 27% nickel-plated copper cores as per ASTM B355: contact us.
 - Outer flexible armour:
 - > Galvanised steel braid: ref. BGMA-CNVAS.
 - > Stainless steel braid: ref. BIMA-CNVAS.
 - Electrical shielding:
 - > Nickel-plated copper braid: ref. MABCN-CNVAS.
 - Other options and/or combinations of the options outlined above: contact us.

MULTI-CONDUCTOR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Stranded nickel-plated copper core.
- 2 • Silicone impregnated fibreglass lappings.
- 3 • Silicone-coated mineral fibre braid.
- 4 • Fillers optional, not shown.
- 5 • Silicone-coated mineral fibre braid.

Characteristics General

- Continuous operating temperatures: -60 °C to +400 °C.
- Good resistance to thermal shock.
- Excellent ageing.

Electrical

- Rated voltage: 300/500 V.
- Test voltage: 2000 V.

Standard products

- Standard conductor colours: see table below.
- Standard outer braid colour: grey.
- Some cables may include a fibreglass tape or other separating tape under the outer braid.

Standard conductor colours

Number of conductors	With an earth wire	Without an earth wire
2	-	Blue – Brown (or Grey)
3	Yellow/Green – Blue – Brown (or Grey)	Brown – Black – Grey (or Blue)
4	Yellow/Green – Brown – Black – Grey (or Blue)	Blue – Brown – Black – Grey
5	Yellow/Green – Blue – Black – Grey – Brown (or Red)	Blue – Brown – Black – Grey – Black (or Red)
≥6	Yellow/Green – Grey or White non-numbered	Grey or White non-numbered

Identification

Multi-conductor cables without an earth wire are identified as follows:

< Number of conductors > X < Cross-section > mm² (example: 3 X 1.5 mm²).

Multi-conductor cables with an earth wire are identified by the symbol G in the place of the X (example 3 G 1.5 mm²).

For this product, please contact:

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Conducting core			INSULATED CONDUCTORS		SHEATHED CABLE	
Nominal cross-section (mm ²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Nominal thickness of insulation (mm)	Nominal diameter of the conductor (mm)	Nominal diameter of the cable (mm)	Approximate linear weight (kg/km)
2 × 0.5	7 × 0.30	36.7	0.8	2.5	6.5	39.5
3 × 0.5	7 × 0.30	36.7	0.8	2.5	6.9	55.1
4 × 0.5	7 × 0.30	36.7	0.8	2.5	7.5	65.4
5 × 0.5	7 × 0.30	36.7	0.8	2.5	8.2	80.0
7 × 0.5	7 × 0.30	36.7	0.8	2.5	9.0	101
2 × 0.75	11 × 0.30	24.8	0.8	2.7	6.9	57.2
3 × 0.75	11 × 0.30	24.8	0.8	2.7	7.3	63.3
4 × 0.75	11 × 0.30	24.8	0.8	2.7	8.0	80.4
5 × 0.75	11 × 0.30	24.8	0.8	2.7	8.7	100
7 × 0.75	11 × 0.30	24.8	0.8	2.7	9.7	126
2 × 1	14 × 0.30	18.2	0.9	3.2	7.9	71.1
3 × 1	14 × 0.30	18.2	0.9	3.2	8.4	86.0
4 × 1	14 × 0.30	18.2	0.9	3.2	9.2	107
5 × 1	14 × 0.30	18.2	0.9	3.2	10.2	136
7 × 1	14 × 0.30	18.2	0.9	3.2	11.1	170
12 × 1	14 × 0.30	18.2	0.9	3.2	14.8	283
19 × 1	14 × 0.30	18.2	0.9	3.2	17.5	442
24 × 1	14 × 0.30	18.2	0.9	3.2	20.7	538
27 × 1	14 × 0.30	18.2	0.9	3.2	21.2	606
37 × 1	14 × 0.30	18.2	0.9	3.2	23.9	830
2 × 1.5	21 × 0.30	12.2	0.9	3.4	8.3	83.7
3 × 1.5	21 × 0.30	12.2	0.9	3.4	8.6	108
4 × 1.5	21 × 0.30	12.2	0.9	3.4	9.0	130
5 × 1.5	21 × 0.30	12.2	0.9	3.4	9.6	166
7 × 1.5	21 × 0.30	12.2	0.9	3.4	10.6	213
12 × 1.5	21 × 0.30	12.2	0.9	3.4	15.6	356
19 × 1.5	21 × 0.30	12.2	0.9	3.4	18.5	558
24 × 1.5	21 × 0.30	12.2	0.9	3.4	21.9	711
27 × 1.5	21 × 0.30	12.2	0.9	3.4	22.4	730
37 × 1.5	21 × 0.30	12.2	0.9	3.4	25.3	1001
2 × 2.5	35 × 0.30	7.56	0.9	4.0	9.5	101
3 × 2.5	35 × 0.30	7.56	0.9	4.0	10.0	149
4 × 2.5	35 × 0.30	7.56	0.9	4.0	11.2	180
5 × 2.5	35 × 0.30	7.56	0.9	4.0	12.3	221
7 × 2.5	35 × 0.30	7.56	0.9	4.0	13.5	275
12 × 2.5	35 × 0.30	7.56	0.9	4.0	18.1	467
2 × 4	56 × 0.30	5.09	1.0	4.5	10.5	162
3 × 4	56 × 0.30	5.09	1.0	4.5	11.2	217
4 × 4	56 × 0.30	5.09	1.0	4.5	12.4	262
5 × 4	56 × 0.30	5.09	1.0	4.5	13.7	332
7 × 4	56 × 0.30	5.09	1.0	4.5	15.0	440
2 × 6	84 × 0.30	3.39	1.0	5.0	11.5	200
3 × 6	84 × 0.30	3.39	1.0	5.0	12.3	289
4 × 6	84 × 0.30	3.39	1.0	5.0	13.6	340
5 × 6	84 × 0.30	3.39	1.0	5.0	15.1	434
7 × 6	84 × 0.30	3.39	1.0	5.0	16.5	569
2 × 10	80 × 0.40	1.95	1.6	8.0	17.5	350
3 × 10	80 × 0.40	1.95	1.6	8.0	18.7	467
4 × 10	80 × 0.40	1.95	1.6	8.0	20.8	668
2 × 16	126 × 0.40	1.24	1.7	9.0	19.5	593
3 × 16	126 × 0.40	1.24	1.7	9.0	20.9	790
4 × 16	126 × 0.40	1.24	1.7	9.0	23.2	936
2 × 25	196 × 0.40	0.795	1.8	10.6	22.7	748
3 × 25	196 × 0.40	0.795	1.8	10.6	24.3	1122
4 × 25	196 × 0.40	0.795	1.8	10.6	27.1	1496
2 × 35	276 × 0.40	0.565	2.2	13.0	27.5	1132
3 × 35	276 × 0.40	0.565	2.2	13.0	29.4	1650
4 × 35	276 × 0.40	0.565	2.2	13.0	32.9	2264

HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILICABLE® MA-NVAS

-60 °C to +450 °C



Approvals - standards

- Nickel type 200, as per standards ASTM B160, DIN 17753 and DIN 17740.
- Halogen-free: IEC 60754-1 / EN 50267-2-1.
 - Fire retardant: NF C 32-070 test C1.
- Resistance to vertical flame propagation for an insulated cable: IEC 60332-1-2 / EN 50265-2-1 NF C 32-070 test C2.
- VERITAS approval certificate No. BV.256192.

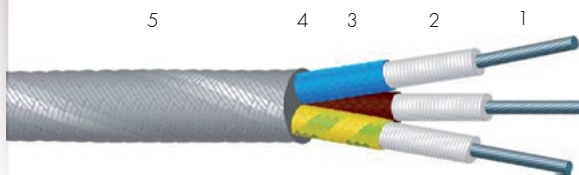
Applications

- All cabling in hot atmospheres up to 450 °C.
 - Cabling in the metallurgical industry, glassworks, etc.
- Cabling for industrial furnaces and air ovens, machines for thermoplastics or rubber, welding stations, etc.
- Cabling for heating resistors, cartridges, bands and plates.

Options

- Other nominal cross-sections and flexibility classes: contact us.
- Other numbers of conductors: contact us.
 - Outer flexible armour:
 - > Galvanised steel braid: ref. BGMA-NVAS.
 - > Stainless steel braid: ref. BIMA-NVAS.
 - Electrical shielding:
 - > Nickel-plated copper braid: ref. MABCN-NVAS.
 - Other options and/or combinations of the options outlined above: contact us.

MULTI-CONDUCTOR WIRES AND CABLES WITH COMPOSITE INSULATION



- 1 • Stranded nickel core
- 2 • Silicone impregnated fibreglass lappings.
- 3 • Silicone-coated mineral fibre braid.
- 4 • Fillers optional, not shown.
- 5 • Silicone-coated mineral fibre braid.

Characteristics General

- Continuous operating temperatures: -60 °C to +450 °C.
- Good resistance to thermal shocks and oxidization of core.
- Excellent ageing.

Electrical

- Rated voltage: 300/500 V.
- Test voltage: 2000 V.

Standard products

- Standard conductor colours: see table below.

Number	Colours
2	Blue – Grey
3	Yellow/Green – Blue – Brown
4	Yellow/Green – Brown – Black – Blue
5	Yellow/Green – Blue – Brown – Black – Grey

- Outer braid with or without coloured spiral stripe.
- Some cables may include a fibreglass tape or other separating tape under the outer braid.

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Conducting core

INSULATED CONDUCTORS

SHEATHED CABLE

Nominal cross-section (mm ²)	Nominal stranding	Maximum linear resistance at 20 °C	Nominal thickness of insulation (mm)	Nominal diameter of the conductor (mm)	Nominal diameter of the cable (mm)	Approximate linear weight (kg/km)
2 x 0.75	11 x 0.30	156	0.8	2.7	6.9	50.1
3 G 0.75	11 x 0.30	156	0.8	2.7	7.3	68.1
4 G 0.75	11 x 0.30	156	0.8	2.7	8.0	89.0
5 G 0.75	11 x 0.30	156	0.8	2.7	8.7	108
2 x 1	14 x 0.30	115	0.9	3.2	7.9	69.2
3 G 1	14 x 0.30	115	0.9	3.2	8.4	80.2
4 G 1	14 x 0.30	115	0.9	3.2	9.2	104
5 G 1	14 x 0.30	115	0.9	3.2	10.2	130
2 x 1.5	21 x 0.30	77.2	0.9	3.4	8.3	80.8
3 G 1.5	21 x 0.30	77.2	0.9	3.4	8.6	97.6
4 G 1.5	21 x 0.30	77.2	0.9	3.4	9.0	122
5 G 1.5	21 x 0.30	77.2	0.9	3.4	9.6	151
7 G 1.5	21 x 0.30	77.2	0.9	3.4	10.6	208
12 G 1.5	21 x 0.30	77.2	0.9	3.4	15.6	338
3 G 2.5	35 x 0.30	47.2	0.9	4.0	10.0	150
4 G 2.5	35 x 0.30	47.2	0.9	4.0	11.2	170
5 G 2.5	35 x 0.30	47.2	0.9	4.0	12.3	218
7 G 2.5	35 x 0.30	47.2	0.9	4.0	13.5	284
3 G 4	56 x 0.30	31.5	1.0	4.5	11.2	180
4 G 4	56 x 0.30	31.5	1.0	4.5	12.4	231
5 G 4	56 x 0.30	31.5	1.0	4.5	13.7	296
3 G 6	84 x 0.30	21.0	1.0	5.0	12.3	265
4 G 6	84 x 0.30	21.0	1.0	5.0	13.6	349
5 G 6	84 x 0.30	21.0	1.0	5.0	15.1	432
3 G 10	80 x 0.40	12.1	1.6	8.0	18.7	527
4 G 10	80 x 0.40	12.1	1.6	8.0	20.8	695
5 G 10	80 x 0.40	12.1	1.6	8.0	23.2	862

For this product, please contact:

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VERY HIGH SAFETY CABLES FOR INDUSTRIAL APPLICATIONS

FT No.	PRODUCT REFERENCE	PAGE
3301	SILIFLAM THS - OVERVIEW	44
3302	SILIFLAM THS 1000 SERIES	46
3303	SILIFLAM THS 1200 SERIES	48
3304	SILIFLAM THS 1400 SERIES	50
3305	SILIFLAM THS 1500 SERIES	52

HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILIFLAM® THS

Very high safety cables for industrial applications

+ 400 °C to + 1400 °C ⁽¹⁾

General

SILIFLAM® THS cables are very high safety cables consisting of high-performance materials:

- Conducting metals such as nickel-plated copper, pure nickel, copper-nickel alloys, refractory metals, etc.
- Insulating materials such as mica, mineral and ceramic fibres, special glass, quartz, borosilicoaluminate, polyimide, polytetrafluorethylene, special organic polymers, resins and synthetic elastomers based on siloxanes, etc.

SILIFLAM® THS cables are totally asbestos-free.

They are available as standard versions or variants specially designed by our engineers and technicians for high-risk industrial applications and any installation continually or occasionally subject to very high temperatures.

SILIFLAM® THS products can withstand conditions and temperatures that no other standard cable on the market would ever be able to withstand.

They are particularly designed to power industrial installations and keep them running under the most severe operating conditions.

They can also be used in zones where the ambient conditions are liable to vary under exceptional or accidental circumstances and attain abnormal levels. In this case, SILIFLAM® THS retain their electrical integrity for a period of time, in order to take the necessary measures to shut down the installation or evacuate personnel or appliances.

Operating temperatures and parameters ⁽¹⁾

Due to their specificity, and the nature of the installations powered, it is difficult to state specific and perfectly defined operating temperature ranges for SILIFLAM® THS.

However, it is possible to state recommended operating limits, essentially representing the temperature range withstood by the insulation without sustaining rapid noteworthy degradation of its dielectric properties, potentially leading to short circuits that can be harmful for the installation.

For this product, please contact:

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VERY HIGH SAFETY CABLES FOR INDUSTRIAL APPLICATIONS

The values given below are therefore indicative.

SILIFLAM® THS 1000 Series: +400 °C to +800 °C.

SILIFLAM® THS 1200 Series: +500 °C to +1000 °C.

SILIFLAM® THS 1400 Series: +700 °C to +1200 °C.

SILIFLAM® THS 1500 Series: +900 °C to +1400 °C.

Correspond to varying exposure times and are dependent on various installation parameters:

- type of heat source: electrical resistor; molten metals or glass (spraying or dip-coating); infrared radiation; flames, furnace walls, etc.;
- proximity of this heat source;
- exposed cable length;
- frequency and duration of exposure;
- connection quality and type;
- installation conditions;
- ambient environment (moisture, steam, corrosive, oxidizing, reducing atmosphere, vacuum, etc.);
- heat exchange conditions (confinement, natural or forced convection, etc.);
- mechanical conditions (traction, compression, shearing, movements, shocks, vibrations, etc.);
- electrical conditions:
 - permissible current in each conductor and permitted heating induced by Joule effect,
 - installation operating voltage,
 - required insulation resistance (this declines significantly with temperature. As such, the insulation can continue to withstand the operating voltage requested, but significant leakage currents may simultaneously appear and impede the operation of the installation).

To ensure a suitable installation capacity in thermal terms, it should be noted that the various influential factors tend to be cumulative, potentially causing the following phenomena in particular:

- thermal runaway (corrosion of conducting metal, most frequently at the connection, inducing an increase in resistivity and cable rupture at the connection);
- premature or even very rapid ageing of insulation;
- alteration of electrical properties of metals.

Variation of any one of the installation parameters or the combined action of a number of these parameters may be a significant influence on the temperature range that the cable is liable to withstand and tests under real-life conditions are strongly recommended.

Our technical departments are at your disposal to provide you with technical data or design a solution suited to your specifications.

We cannot be held liable in the event of damage sustained by the cable and/or its environment.

(1) All temperature stated in this document are indicative and tests under real-life conditions are required.

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Standard products

Conducting cores (2%, 27% nickel-plated copper or pure nickel)

- Single-conductor: 0.22 mm² to 400 mm².
- Multi-conductor: > 0.22 mm² to 2.5 mm²: 2 to 37 conductors.
> 4 to 6 mm²: 2 to 19 conductors.
> 10 to 95 mm²: 2 to 5 conductors.

Multi-conductor cable conductor colour:

- **SILIFLAM® THS 1000 and 1200 series:** identification as per IEC 60445.
- **SILIFLAM® THS 1400 and 1500 series:** natural white or as per IEC 60445.

Outer colour:

- **SILIFLAM® THS 1000 and 1200 series:** brick red or grey.
- **SILIFLAM® THS 1400 and 1500 series:** natural white.

Note: The colour of the conductors is used for the purposes of identification during assembly.

In view of the extreme temperatures liable to be encountered by SILIFLAM® THS, some colours may partially disappear or be modified in the course of normal cable use, as most of the pigments used are not capable of withstanding the temperatures liable to be applied to these products.

SILIFLAM® THS are available not only in a standard version, but also as standard variants with PTFE (THS 1030 and 1230 series) or polyimide (THS 1050, 1250, 1450 and 1550 series) reinforced dielectric strength.

As an option, SILIFLAM® THS can include an electrical screen (–BCN series) or stainless steel armour (–BI series).

They can be customized for each specific application (see Options).

Applications

- Heavy industry: steel industry, foundry, steelworks, glassworks, etc.
- Chemical, nuclear, oil, mining industry, etc.
- Aeronautical and space industry.
- All installations subject to high temperatures or extreme conditions.

Approvals - standards

Due to their high degree of specificity **SILIFLAM® THS** products are not described in product standards and thus cannot receive approval certificates for specific standards.

Nevertheless, the type of insulation used provides them with exceptional properties allowing compliance with all or part of the requirements of the most stringent international standards, particularly in terms of fire behaviour: IEC 60331-11, IEC 60331-21, IEC 60332-1-1, IEC 60332-1-2, IEC 60332-3, ANSI/IEEE 383, NF C 32-070, VDE 0472-814, MIL W 25038, NBN C 30-004... Please contact us to find out the parts of the standards applicable, with which each THS reference available is in compliance.

Options

- Other sheath or conductor colours: contact us.
- AWG cross-sections: contact us.
- Conducting cores made of other high-temperature metals (NiCr, FeCrAl, CuNi alloys, etc.) or refractory metals (tantalum, tungsten, titanium, molybdenum, etc.): contact us.
- Special hybrid or customized cables, designs on request to specifications: contact us.
- The **SILIFLAM® THS** range is also available as pyrometry cables (thermocouple, extension, compensation, platinum detector connection): contact us.
- Induction heating cables, protective outer sheathing of standard commercial cables: contact us.

Reference

The example below gives an indication of the process used to identify variants from the **SILIFLAM® THS** range.

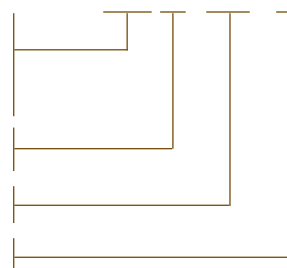
Example: **SILIFLAM® THS 1230 M - BCN - BI**
SILIFLAM® THS xxxx x xxx xx

Type of insulation and sheathing (see specific technical data sheets):
 Standard series: **SILIFLAM® THS 1000 - 1030 - 1050 - 1200 - 1230 - 1250 - 1400 - 1450 - 1500 - 1550.**
 Or designed on request (examples: **SILIFLAM® THS 1006, THS 1254, THS 1438, etc.**).

U: unipolar (except THS 1000 series) / M: multi-conductor.

BCN (optional): nickel-plated copper electrical screen braid.

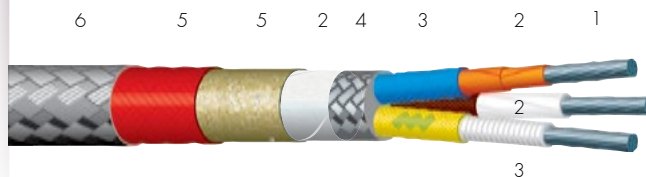
BI (optional): stainless steel outer shielding.



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SILIFLAM® THS 1000

VERY HIGH SAFETY CABLES
FOR INDUSTRIAL APPLICATIONS



- 1 • Nickel-plated copper core as per ASTM B355.
- 2 • (Optional) 2 heat-sealed PTFE (THS 1030) or polyimide (THS 1050) tapes.
- 3 • Coated high temperature fiberglass braid.
- 4 • (Optional) Nickel-plated copper electrical screen braid.
- 5 • THS 1000 type composite mica and coated mineral fiberglass sheathing.
- 6 • (Optional) AISI 304 stainless steel outer shielding.

Approvals - standards

- Nickel-plated copper complying with the 2% class as per standard ASTM B355.

Applications

- See range presentation sheet (FT 3301). The THS 1000 series is recommended for zones subject to high temperature peaks (sporadic flames, etc.) and moderately high continuous operating temperatures.

Options

- Other nominal cross-sections: contact us.
 - 27% class nickel-plated copper cores as per ASTM B355: contact us.
- Pure nickel core, ref. SILIFLAM THS 1001: contact us.
- Other numbers of conductors: contact us.
 - Other options or cables based on the THS 1000 series, designed on request: contact us.

Characteristics

General

- Continuous operating temperatures: See general presentation sheet (FT 3301).
- Good resistance to thermal shocks and ageing.

Electrical

- Rated voltage: 300/500 V to 600/1000V.
- Test voltage: THS 1000 series: 1500 V.
THS 1030 and 1050 series: 2500V.

Standard products

- See also: Range presentation sheet (FT 3301).
- Ref. THS 1000 M: THS 1000 type insulation and sheathing.
- Ref. THS 1030 M: THS 1000 insulation and sheathing with PTFE reinforcement.
- Ref. THS 1050 M: THS 1000 insulation and sheathing with polyimide reinforcement.
- Ref. THS 1000 M - BCN: Nickel-plated copper electrical screen.
- Ref. THS 1000 M - BI: Stainless steel flexible armour.

For this product, please contact:

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Conducting core			INSULATED CONDUCTORS	SHEATHED CABLE
Nominal cross-section (mm ²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Nominal diameter of the conductor (mm)	Approximate diameter ⁽¹⁾ of cable (THS 1000 M version) (mm)
2 x 0.5	7 x 0.30	40.1	2.5	6.6
3 x 0.5	7 x 0.30	40.1	2.5	6.9
4 x 0.5	7 x 0.30	40.1	2.5	7.6
5 x 0.5	7 x 0.30	40.1	2.5	8.4
7 x 0.5	7 x 0.30	40.1	2.5	9.1
2 x 0.75	11 x 0.30	26.7	2.7	7.0
3 x 0.75	11 x 0.30	26.7	2.7	7.4
4 x 0.75	11 x 0.30	26.7	2.7	8.2
5 x 0.75	11 x 0.30	26.7	2.7	9.1
7 x 0.75	11 x 0.30	26.7	2.7	10.5
2 x 1	14 x 0.30	20.0	3.2	7.8
3 x 1	14 x 0.30	20.0	3.2	8.8
4 x 1	14 x 0.30	20.0	3.2	9.4
5 x 1	14 x 0.30	20.0	3.2	10.3
7 x 1	14 x 0.30	20.0	3.2	11.5
12 x 1	14 x 0.30	20.0	3.2	15.0
2 x 1.5	21 x 0.30	13.7	3.4	8.1
3 x 1.5	21 x 0.30	13.7	3.4	9.0
4 x 1.5	21 x 0.30	13.7	3.4	10.0
5 x 1.5	21 x 0.30	13.7	3.4	10.8
7 x 1.5	21 x 0.30	13.7	3.4	11.8
12 x 1.5	21 x 0.30	13.7	3.4	15.8
2 x 2.5	35 x 0.30	8.21	4.0	9.6
3 x 2.5	35 x 0.30	8.21	4.0	10.2
4 x 2.5	35 x 0.30	8.21	4.0	11.0
5 x 2.5	35 x 0.30	8.21	4.0	12.4
7 x 2.5	35 x 0.30	8.21	4.0	14.0
12 x 2.5	35 x 0.30	8.21	4.0	18.2
2 x 4	56 x 0.30	5.09	4.5	10.7
3 x 4	56 x 0.30	5.09	4.5	11.4
4 x 4	56 x 0.30	5.09	4.5	12.7
5 x 4	56 x 0.30	5.09	4.5	13.7
7 x 4	56 x 0.30	5.09	4.5	15.2
2 x 6	84 x 0.30	3.39	5.0	11.7
3 x 6	84 x 0.30	3.39	5.0	12.5
4 x 6	84 x 0.30	3.39	5.0	14.0
5 x 6	84 x 0.30	3.39	5.0	15.3
3 x 10	80 x 0.40	1.95	8.0	18.9
4 x 10	80 x 0.40	1.95	8.0	21.3
5 x 10	80 x 0.40	1.95	8.0	23.4
3 x 16	126 x 0.40	1.24	9.0	21.1
4 x 16	126 x 0.40	1.24	9.0	23.4
5 x 16	126 x 0.40	1.24	9.0	26.1
3 x 25	196 x 0.40	0.795	10.6	24.5
4 x 25	196 x 0.40	0.795	10.6	27.3
5 x 25	196 x 0.40	0.795	10.6	30.4
3 x 35	276 x 0.40	0.565	13.0	29.7
4 x 35	276 x 0.40	0.565	13.0	33.0
5 x 35	276 x 0.40	0.565	13.0	36.9
3 x 50	396 x 0.40	0.393	14.4	32.6
4 x 50	396 x 0.40	0.393	14.4	36.4
5 x 50	396 x 0.40	0.393	14.4	40.7

(1) the diameters stated are approximate. They can vary substantially (± 2 mm or $\pm 20\%$) according to the series or options in question (THS 1030, THS 1050, BCN, BI option, etc.) and do not apply to derivative products designed on request, which are the subject of a specific technical data sheet.

HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

VERY HIGH SAFETY CABLES FOR INDUSTRIAL APPLICATIONS

SILIFLAM® THS 1200

Approvals - standards

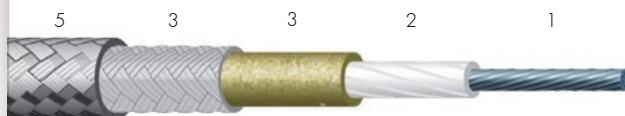
- Nickel-plated copper complying with the 2% or 27% class as per standard ASTM B355.

Applications

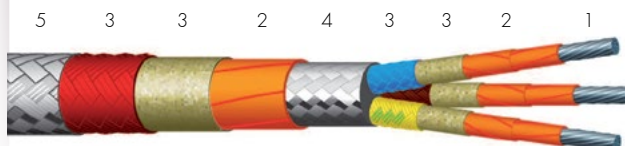
- See range presentation sheet (FT 3301).
The THS 1200 series is recommended for zones subject to very high temperature peaks (flames, falling slag, etc.) and high continuous operating temperatures.

Options

- Other nominal cross-sections: contact us.
- Pure nickel core, ref. SILIFLAM THS 1201: contact us.
- Other numbers of conductors: contact us.
 - Other options or cables based on the THS 1200 series, designed on request: contact us.



THS 1200 U



THS 1200 M

- 1 • 2% or 27% nickel-plated copper core as per ASTM B355.
- 2 • (Optional) 2 heat-sealed PTFE (THS 1230) or polyimide (THS 1250) tapes.
- 3 • THS 1200 type composite insulation and sheathing: mica and coated mineral fibre.
- 4 • (Optional) Nickel-plated copper electrical screen braid.
- 5 • (Optional) AISI 304 stainless steel outer shielding.

Characteristics General

- Continuous operating temperatures: See general presentation sheet (FT 3301).
- Good resistance to thermal shocks and ageing.

Electrical

- Rated voltage: 300/500 V to 600/1000V.
- Test voltage: THS 1200 series: 1500 V.
THS 1230 and 1250 series: 2500V.

Standard products

- See also: Range presentation sheet (FT 3301).
- Ref. THS 1200 U: Unipolar - THS 1200 type insulation.
- Ref. THS 1200 M: Multi-conductor - THS 1200 type insulation and sheathing.
- Ref. THS 1230 U/M: THS 1200 insulation / sheathing with PTFE reinforcement.
- Ref. THS 1250 U/M: THS 1200 insulation / sheathing with polyimide reinforcement.
- Ref. THS 1200 U/M - BCN: Nickel-plated copper electrical screen.
- Ref. THS 1200 U/M - BI: Stainless steel flexible armour.

For this product, please contact:

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For an optimum use of the cables produced by our company, we recommend testing in real conditions. Our sales department is available for a possible provision of samples, and/or for the conditions of a complete study in our laboratories.

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Conducting core

INSULATED CONDUCTORS

SHEATHED CABLE

Nominal cross-section (mm ²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Approximate diameter ⁽¹⁾ of single conductors (THS 1200 M version) (mm)	Approximate diameter (1) of cable (THS 1200 U and 1200 M version) (mm)
THS 1200 U				
1 x 0.5	7 x 0.30	40.1	-	2.2
1 x 0.75	11 x 0.30	26.7	-	2.6
1 x 1	14 x 0.30	20.0	-	3.0
1 x 1.5	21 x 0.30	13.7	-	3.2
1 x 2.5	35 x 0.30	8.21	-	3.6
1 x 4	56 x 0.30	5.09	-	4.3
1 x 6	84 x 0.30	3.39	-	5.2
1 x 10	80 x 0.40	1.95	-	8.0
1 x 16	126 x 0.40	1.24	-	8.6
1 x 25	196 x 0.40	0.795	-	9.9
1 x 35	276 x 0.40	0.565	-	11.0
1 x 50	396 x 0.40	0.393	-	13.2
1 x 70	543 x 0.40	0.277	-	16.1
1 x 95	740 x 0.40	0.210	-	18.1
1 x 120	925 x 0.40	0.164	-	20.2
1 x 150	1184 x 0.40	0.132	-	21.6
THS 1200 M				
2 x 0.5	7 x 0.30	40.1	2.2	6.1
3 x 0.5	7 x 0.30	40.1	2.2	6.4
4 x 0.5	7 x 0.30	40.1	2.2	6.9
5 x 0.5	7 x 0.30	40.1	2.2	7.7
7 x 0.5	7 x 0.30	40.1	2.2	8.3
2 x 0.75	11 x 0.30	26.7	2.6	6.8
3 x 0.75	11 x 0.30	26.7	2.6	7.3
4 x 0.75	11 x 0.30	26.7	2.6	8.1
5 x 0.75	11 x 0.30	26.7	2.6	8.7
7 x 0.75	11 x 0.30	26.7	2.6	9.4
2 x 1	14 x 0.30	20.0	3.0	7.6
3 x 1	14 x 0.30	20.0	3.0	8.1
4 x 1	14 x 0.30	20.0	3.0	8.9
5 x 1	14 x 0.30	20.0	3.0	9.8
7 x 1	14 x 0.30	20.0	3.0	10.6
12 x 1	14 x 0.30	20.0	3.0	14.0
2 x 1.5	21 x 0.30	13.7	3.2	8.0
3 x 1.5	21 x 0.30	13.7	3.2	8.5
4 x 1.5	21 x 0.30	13.7	3.2	9.0
5 x 1.5	21 x 0.30	13.7	3.2	10.0
7 x 1.5	21 x 0.30	13.7	3.2	11.2
12 x 1.5	21 x 0.30	13.7	3.2	15.0
19 x 1.5	21 x 0.30	13.7	3.2	17.5
27 x 1.5	21 x 0.30	13.7	3.2	21.8
37 x 1.5	21 x 0.30	13.7	3.2	24.2
2 x 2.5	35 x 0.30	8.21	3.6	8.8
3 x 2.5	35 x 0.30	8.21	3.6	9.2
4 x 2.5	35 x 0.30	8.21	3.6	10.3
5 x 2.5	35 x 0.30	8.21	3.6	11.4
7 x 2.5	35 x 0.30	8.21	3.6	12.4
2 x 4	56 x 0.30	5.09	4.3	10.2
3 x 4	56 x 0.30	5.09	4.3	10.9
4 x 4	56 x 0.30	5.09	4.3	11.6
5 x 4	56 x 0.30	5.09	4.3	13.4
7 x 4	56 x 0.30	5.09	4.3	14.6
2 x 6	84 x 0.30	3.39	5.2	12.1
3 x 6	84 x 0.30	3.39	5.2	12.9
4 x 6	84 x 0.30	3.39	5.2	14.3
5 x 6	84 x 0.30	3.39	5.2	15.8
3 x 10	80 x 0.40	1.95	8.0	18.8
4 x 10	80 x 0.40	1.95	8.0	20.9
5 x 10	80 x 0.40	1.95	8.0	23.4
3 x 16	126 x 0.40	1.24	9.0	21.1
4 x 16	126 x 0.40	1.24	9.0	23.4
5 x 16	126 x 0.40	1.24	9.0	26.1
3 x 25	196 x 0.40	0.795	10.6	24.5
4 x 25	196 x 0.40	0.795	10.6	27.3
5 x 25	196 x 0.40	0.795	10.6	30.4
3 x 35	276 x 0.40	0.565	13.0	29.6
4 x 35	276 x 0.40	0.565	13.0	33.0
5 x 35	276 x 0.40	0.565	13.0	36.9
3 x 50	396 x 0.40	0.393	14.4	32.6
4 x 50	396 x 0.40	0.393	14.4	36.5
5 x 50	396 x 0.40	0.393	14.4	40.7

(1) the diameters stated are approximate. They can vary substantially (± 2 mm or $\pm 20\%$) according to the series or options in question (THS 1230, THS 1250, BCN, BI option, etc.) and do not apply to derivative products designed on request, which are the subject of a specific technical data sheet.

HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILIFLAM® THS 1400

VERY HIGH SAFETY CABLES FOR INDUSTRIAL APPLICATIONS

Approvals - standards

- Nickel type 200, as per standards DIN 17753, DIN 17740 and ASTM B160.

Applications

- See range presentation sheet (FT 3301).
The THS 1400 series is recommended for zones subject to very high continuous or temperature peaks (flames, falling slag, molten metals, proximity of furnace door, etc.).

Options

- Other nominal cross-sections: contact us.
- Other numbers of conductors: contact us.
- 27% nickel-plated copper conducting cores: contact us.
 - Refractory metal conducting cores: contact us.
- Other options or cables based on the THS 1400 series, designed on request: contact us.

Characteristics General

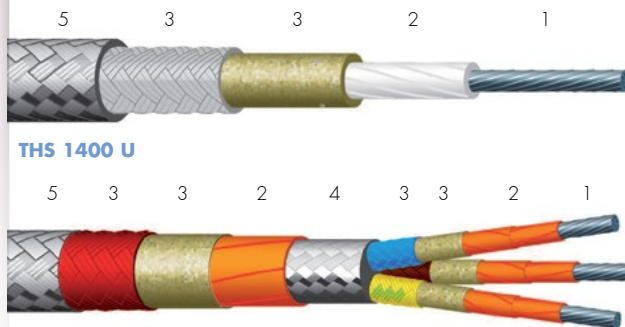
- Continuous operating temperatures: See general presentation sheet (FT 3301).
- Good resistance to thermal shocks and ageing.

Electrical

- Rated voltage: 300/500 V to 600/1000V.
- Test voltage: THS 1400 series: 1500 V.
THS 1430 and 1450 series: 2500V.

Standard products

- See also: Range presentation sheet (FT 3301).
- Ref. THS 1400 U: Unipolar - THS 1400 type insulation.
- Ref. THS 1400 M: Multi-conductor - THS 1400 type insulation and sheathing.
- Ref. THS 1430 U/M: THS 1400 insulation / sheathing with PTFE reinforcement.
- Ref. THS 1450 U/M: THS 1400 insulation / sheathing with polyimide reinforcement.
- Ref. THS 1400 U/M - BCN: Nickel-plated copper electrical screen.
- Ref. THS 1400 U/M - BI: Stainless steel flexible armour.



THS 1400 U

THS 1400 M

- 1 • Type 200 pure nickel core as per ASTM B160.
- 2 • (Optional) 2 heat-sealed PTFE (THS 1430) or polyimide (THS 1450) tapes.
- 3 • THS 1400 type composite insulation and sheathing: mica and coated silica fibre.
- 4 • (Optional) Nickel-plated copper electrical screen braid.
- 5 • (Optional) AISI 304 stainless steel outer shielding.

For this product, please contact:

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For an optimum use of the cables produced by our company, we recommend testing in real conditions. Our sales department is available for a possible provision of samples, and/or for the conditions of a complete study in our laboratories.
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Conducting core

INSULATED CONDUCTORS

SHEATHED CABLE

Nominal cross-section (mm²)

Nominal stranding

Maximum linear resistance at 20 °C (Ω/km)

Approximate diameter ⁽¹⁾ of single conductors (THS 1400 M version) (mm)

Approximate diameter ⁽¹⁾ of cable (THS 1400 U and THS 1400 M version) (mm)

THS 1400 U

1 x 0.5	7 x 0.30	229
1 x 0.75	11 x 0.30	156
1 x 1	14 x 0.30	115
1 x 1.5	21 x 0.30	77.2
1 x 2.5	35 x 0.30	47.2
1 x 4	56 x 0.30	31.5
1 x 6	84 x 0.30	21.0

-

-

-

-

-

-

-

2.2

2.6

3.0

3.2

3.8

4.5

5.0

THS 1400 M

2 x 0.5	7 x 0.30	229
3 x 0.5	7 x 0.30	229
4 x 0.5	7 x 0.30	229
5 x 0.5	7 x 0.30	229
7 x 0.5	7 x 0.30	229

2.2

2.2

2.2

2.2

2.2

6.1

6.4

6.9

7.7

8.3

2 x 0.75	11 x 0.30	156
3 x 0.75	11 x 0.30	156
4 x 0.75	11 x 0.30	156
5 x 0.75	11 x 0.30	156
7 x 0.75	11 x 0.30	156

2.6

2.6

2.6

2.6

2.6

6.8

7.0

7.7

8.4

9.1

2 x 1	14 x 0.30	115
3 x 1	14 x 0.30	115
4 x 1	14 x 0.30	115
5 x 1	14 x 0.30	115
7 x 1	14 x 0.30	115

3.0

3.0

3.0

3.0

3.0

7.7

8.2

8.9

9.8

10.6

2 x 1.5	21 x 0.30	77.2
3 x 1.5	21 x 0.30	77.2
4 x 1.5	21 x 0.30	77.2
5 x 1.5	21 x 0.30	77.2
7 x 1.5	21 x 0.30	77.2

3.2

3.2

3.2

3.2

3.2

8.0

8.5

9.2

10.2

11.2

2 x 2.5	35 x 0.30	47.2
3 x 2.5	35 x 0.30	47.2
4 x 2.5	35 x 0.30	47.2

3.8

3.8

3.8

9.1

9.6

10.7

2 x 4	56 x 0.30	31.5
3 x 4	56 x 0.30	31.5
4 x 4	56 x 0.30	31.5

4.5

4.5

4.5

10.6

11.2

12.5

2 x 6	84 x 0.30	21.0
3 x 6	84 x 0.30	21.0
4 x 6	84 x 0.30	21.0

5.0

5.0

5.0

11.6

12.4

13.7

(1) the diameters stated are approximate. They can vary substantially (± 2 mm or $\pm 20\%$) according to the series or options in question (THS 1430, THS 1450, BCN, BI option, etc.) and do not apply to derivative products designed on request, which are the subject of a specific technical data sheet.

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HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS

SILIFLAM® THS 1500

Approvals - standards

- Nickel type 200, as per standards DIN 17753, DIN 17740 and ASTM B160.

Applications

- See range presentation sheet (FT 3301).
The THS 1500 series is recommended for zones subject to the most extreme temperatures.

Options

- Other nominal cross-sections: contact us.
- Other numbers of conductors: contact us.
- 27% nickel-plated copper conducting cores: contact us.
- Refractory metal conducting cores: contact us.
- Other options or cables based on the THS 1200 series, designed on request: contact us.

Characteristics General

- Continuous operating temperatures: See general presentation sheet (FT 3301).
- Good resistance to thermal shocks and ageing.

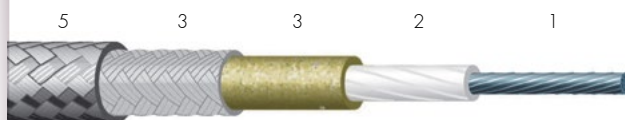
Electrical

- Rated voltage: 300/500 V to 600/1000V.
- Test voltage: THS 1500 series: 1500 V.
THS 1530 and 1550 series: 2500V.

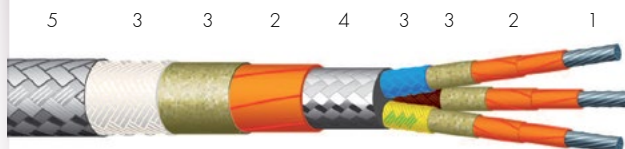
Standard products

- See also: Range presentation sheet (FT 3301).
- Ref. THS 1500 U: Unipolar - THS 1500 type insulation.
- Ref. THS 1500 M: Multi-conductor - THS 1500 type insulation and sheathing.
- Ref. THS 1530 U/M: THS 1500 insulation / sheathing with PTFE reinforcement.
- Ref. THS 1550 U/M: THS 1500 insulation / sheathing with polyimide reinforcement.
- Ref. THS 1500 U/M - BCN: Nickel-plated copper electrical screen.
- Ref. THS 1500 U/M - BI: Stainless steel flexible armour.

VERY HIGH SAFETY CABLES FOR INDUSTRIAL APPLICATIONS



THS 1500 U



THS 1500 M

- 1 • Type 200 pure nickel core as per ASTM B160.
- 2 • (Optional) 2 heat-sealed PTFE (THS 1530) or polyimide (THS 1550) tapes.
- 3 • THS 1500 type composite insulation and sheathing: mica and coated borosilicoaluminate fibre.
- 4 • (Optional) Nickel-plated copper electrical screen braid.
- 5 • (Optional) AISI 304 stainless steel outer shielding.

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LES CABLES DE L'EXTREME

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For an optimum use of the cables produced by our company, we recommend testing in real conditions. Our sales department is available for a possible provision of samples, and/or for the conditions of a complete study in our laboratories.

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Conducting core

INSULATED CONDUCTORS

SHEATHED CABLE

Nominal cross-section (mm²)

Nominal stranding

Maximum linear resistance at 20 °C (Ω/km)

Approximate diameter ⁽¹⁾ of single conductors (THS 1500 M version) (mm)

Approximate diameter ⁽¹⁾ of cable (THS 1500 U and THS 1500 M version) (mm)

THS 1500 U

1 x 0.5	7 x 0.30	229
1 x 0.75	11 x 0.30	156
1 x 1	14 x 0.30	115
1 x 1.5	21 x 0.30	77.2
1 x 2.5	35 x 0.30	47.2
1 x 4	56 x 0.30	31.5
1 x 6	84 x 0.30	21.0

-

-

-

-

-

-

-

2.2

2.6

3.0

3.2

3.8

4.5

5.0

THS 1500 M

2 x 0.5	7 x 0.30	229
3 x 0.5	7 x 0.30	229
4 x 0.5	7 x 0.30	229
5 x 0.5	7 x 0.30	229
7 x 0.5	7 x 0.30	229

2.2

2.2

2.2

2.2

2.2

6.1

6.4

6.9

7.7

8.3

2 x 0.75	11 x 0.30	156
3 x 0.75	11 x 0.30	156
4 x 0.75	11 x 0.30	156
5 x 0.75	11 x 0.30	156
7 x 0.75	11 x 0.30	156

2.6

2.6

2.6

2.6

2.6

6.8

7.0

7.7

8.4

9.1

2 x 1	14 x 0.30	115
3 x 1	14 x 0.30	115
4 x 1	14 x 0.30	115
5 x 1	14 x 0.30	115
7 x 1	14 x 0.30	115

3.0

3.0

3.0

3.0

3.0

7.7

8.2

8.9

9.8

10.6

2 x 1.5	21 x 0.30	77.2
3 x 1.5	21 x 0.30	77.2
4 x 1.5	21 x 0.30	77.2
5 x 1.5	21 x 0.30	77.2
7 x 1.5	21 x 0.30	77.2

3.2

3.2

3.2

3.2

3.2

8.0

8.5

9.2

10.2

11.2

2 x 2.5	35 x 0.30	47.2
3 x 2.5	35 x 0.30	47.2
4 x 2.5	35 x 0.30	47.2

3.8

3.8

3.8

9.1

9.6

10.7

2 x 4	56 x 0.30	31.5
3 x 4	56 x 0.30	31.5
4 x 4	56 x 0.30	31.5

4.5

4.5

4.5

10.6

11.2

12.5

2 x 6	84 x 0.30	21.0
3 x 6	84 x 0.30	21.0
4 x 6	84 x 0.30	21.0

5.0

5.0

5.0

11.6

12.4

13.7

(1) the diameters stated are approximate. They can vary substantially (± 2 mm or $\pm 20\%$) according to the series or options in question (THS 1530, THS 1550, BCN, BI option, etc.) and do not apply to derivative products designed on request, which are the subject of a specific technical data sheet.

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Notes

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Notes

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