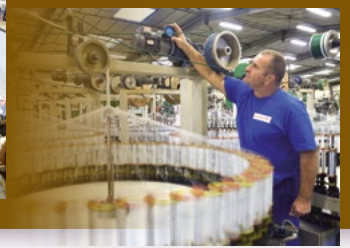
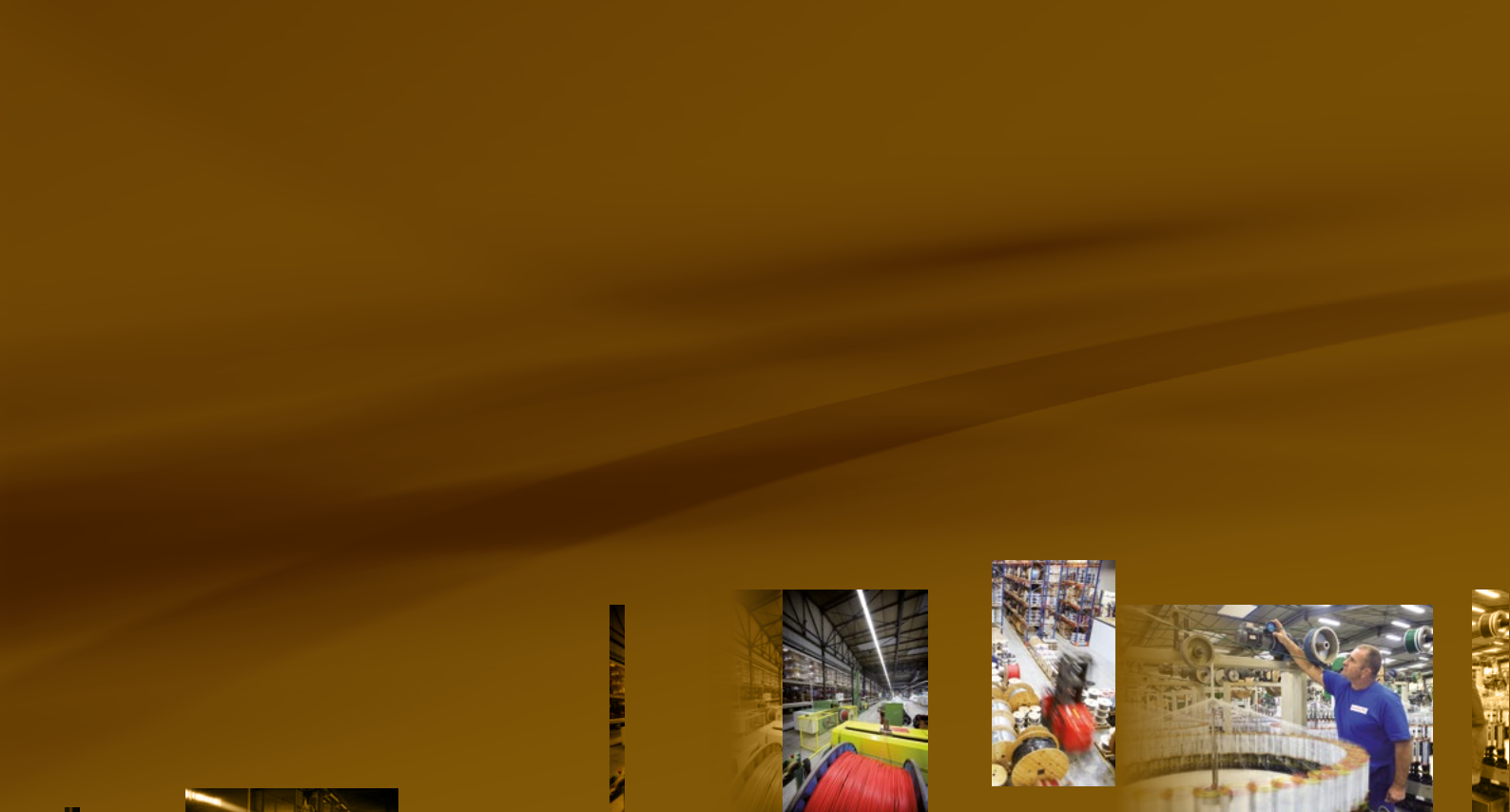




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**HIGH TEMPERATURE WIRES AND CABLES  
FOR THE GENERAL MARKET**  
SECTION III: COMPOSITE INSULATIONS

**omerin**  
LES CABLES DE L'EXTREME

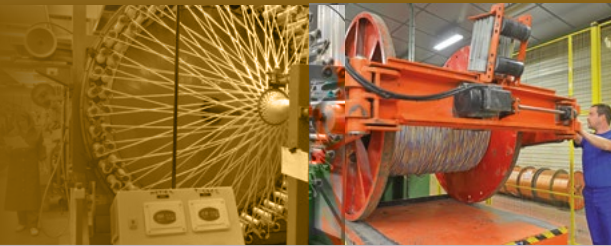


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- **Europe's leading manufacturer of glass-yarn braids**
- **France's leading manufacturer of fire safety cables**

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**HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION I: CROSS LINKED ELASTOMERS** 1

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**HIGH TEMPERATURE WIRES AND CABLES FOR THE GENERAL MARKET SECTION III: COMPOSITE INSULATIONS** 3

**FIRE RESISTANT SAFETY CABLES** 4

**CABLE SOLUTIONS FOR ROLLING STOCK** 5

**CABLES FOR POWER STATIONS AND HIGH-RISK SITES** 6

**MARINE CABLES** 7

**PYROMETRY CABLES** 8

**BRAIDED INSULATING SLEEVINGS** 9

**HIGH TEMPERATURE MEDIUM VOLTAGE POWER CABLES** 10

**CABLE SOLUTIONS FOR AUTOMOTIVE AND E-MOBILITY** 11

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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.

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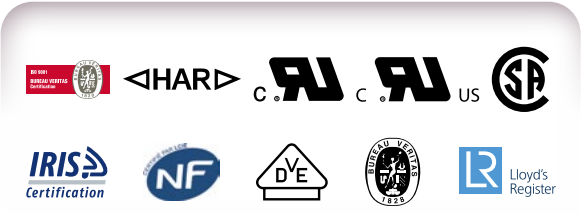
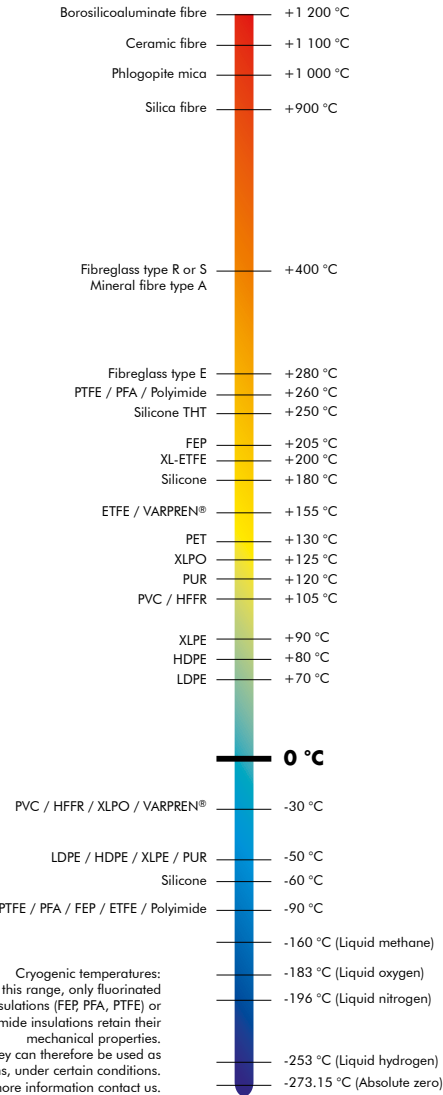
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<b>BIO-HABITAT®</b>	Wires and cables for a home without electromagnetic interference
<b>CERAFIL®</b>	Miniature ceramic insulated wires for very high temperatures
<b>COAXRAIL®</b>	Coaxial cables for railway industry
<b>COAXTHERM®</b>	High temperature coaxial cables
<b>COUPLIX®</b>	Pyrometry cables (thermocouples, extension, compensation cables)
<b>DATARAIL®</b>	Data cables for the railway industry
<b>ELECTROAIR®</b>	Aerospace & Defence wires and cables
<b>ENERSYL®</b>	Electrical cables for power station and high risk sites
<b>FLEXBAT®</b>	Extra flexible battery cables
<b>LUMIPLAST®</b>	Wires and cables for lighting systems
<b>METALTRESSE®</b>	High performance metallic braids
<b>MINOROC®</b>	Very high tensile strength synthetic cables
<b>MULTIMAX®</b>	Power, control and instrumentation cables for the marine industry
<b>MULTI-VX®</b>	Hybrid data and power cables
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<b>OILPLAST®</b>	Cables for industrial environments and intrinsically safe system
<b>OMBILIFLEX®</b>	High performance special multi-function cables
<b>PLASTHERM®</b>	Special thermoplastic insulated wires and cables
<b>POWER CONNECT®</b>	High performance power cords
<b>PROFIPLAST®</b>	Thermoplastic insulated wires and cables
<b>PYRISOL®</b>	Fire resistant power cables for safety circuits
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<b>SILICABLE®</b>	Special high temperature wires and cables
<b>SILICOUL®</b>	Low and medium voltage class H (180°C) power cables
<b>SILIFLAM®</b>	Very high safety cables for extreme temperatures
<b>SILIFLON®</b>	Fluoropolymer insulated high temperature wires and cables
<b>SILIGAINE®</b>	Braided insulating sleeveings
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<b>SOLARPLAST®</b>	Power cables for photovoltaic solar panels
<b>SONDIX®</b>	Platinum resistance temperature sensors connection cables
<b>SPIRFLEX®</b>	High performance spiral cables
<b>TEXALARM®</b>	Cables for safety systems and fire alarms
<b>TS CABLES®</b>	Coaxial and data cables
<b>TS COM 900®</b>	Telephonic cables for very speed reception
<b>TS LAN®</b>	Copper LAN cables
<b>TWINLINK®</b>	High temperature controlled impedance twisted pair cables
<b>TWINPLAST®</b>	Extra flexible cables for battery chargers or jump starters
<b>VARPREN®</b>	Wires and cables with special cross-linked Varpren® insulation
<b>VEROX®</b>	Fiberglass braided seals
<b>VIDEOCOAX®</b>	Analogue and digital video cables



**Thermal classification of insulations**





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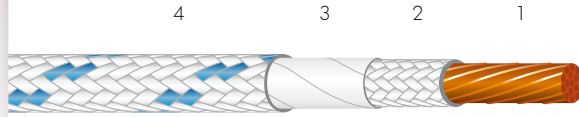
## UNIPOLAR WIRES AND CABLES WITH COMPOSITE INSULATION

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# SILICABLE® GHR

## Lead wire for hermetically sealed motors

### -30 °C to +125 °C



- 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 (mm <sup>2</sup> )					
- 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

For this product, please contact:

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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.

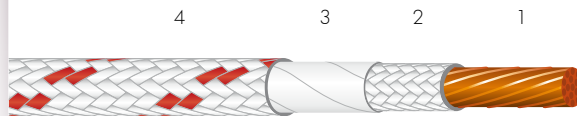
## Applications

- 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



- 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.

## 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 (mm <sup>2</sup> )					
- 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
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- 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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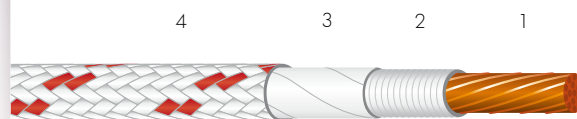
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HIGH TEMPERATURE WIRES AND CABLES  
FOR THE GENERAL MARKET  
SECTION III: COMPOSITE INSULATIONS

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 mm<sup>2</sup>: solid bare copper core (ref. RVMT) – class 1 as per IEC 60228.
- Up to 2.5 mm<sup>2</sup>: 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 <sup>2</sup> )	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.

For this product, please contact:

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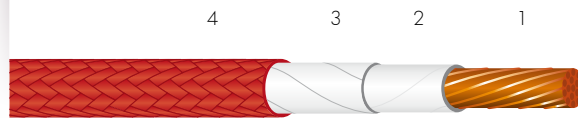
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**SILICABLE® NMVRI-ES****-60°C to +180°C**UNIPOLAR WIRES AND CABLES  
WITH COMPOSITE INSULATION

- 1 • Flexible bare copper core – class 6 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**

- Other cross-sections or colours: contact us.

**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-ES**

Extra-flexible core • Class 6 as per IEC 60228

**INSULATED WIRE OR CABLE**

Nominal cross-section (mm <sup>2</sup> )	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Nominal diameter (mm)	Approximate linear weight (kg/km)
1.5	390 x 0.07	13.3	2.6	15.6
2.5	650 x 0.07	7.98	2.9	24.5
4	1 050 x 0.07	4.95	3.4	39.1
6	301 x 0.15	3.30	4.1	56.7
10	322 x 0.20	1.91	6.2	103
16	516 x 0.20	1.21	7.0	159
25	792 x 0.20	0.780	8.8	248
35	1 121 x 0.20	0.554	9.8	337
50	1 628 x 0.20	0.386	11.5	485
70	2 294 x 0.20	0.272	13.2	667
95	3 034 x 0,20	0.206	15.3	837

For this product, please contact:

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\* Nominal cross-section not included in IEC 60228.

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**SILICABLE® PVS****-60 °C to +230 °C**UNIPOLAR WIRES AND CABLES  
WITH COMPOSITE INSULATION

4 2 3 3 2 1



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

INSULATED WIRE

Nominal cross-section (mm <sup>2</sup> )	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Nominal diameter (mm)	Approximate linear weight (kg/km)
0.5	16 × 0.20	39.0	2.1	8.1
0.6**	19 × 0.20	32.8	2.2	9.0
0.75	24 × 0.20	26.0	2.3	10.8
1	14 × 0.30*	19.5	2.4	13.5
1.5	30 × 0.25	13.3	2.7	17.0
2**	40 × 0.25	9.98	3.0	21.6
2.5	50 × 0.25	7.98	3.2	26.6
3**	42 × 0.30	6.60	3.4	31.6
4	56 × 0.30	4.95	3.8	43.2
6	84 × 0.30	3.30	4.5	66.0

**Option • RPVS**

Solid core • Class 1 as per IEC 60228

INSULATED WIRE

Nominal cross-section (mm <sup>2</sup> )	Nominal diameter (mm)	Approximate linear weight (kg/km)
0.5	1 × 0.80	36.0
0.75	1 × 0.98	24.5
1	1 × 1.13	18.1
1.5	1 × 1.38	12.1
2.5	1 × 1.77	7.41
4	1 × 2.24	4.61
6	1 × 2.76	3.08

\* Stranded core - class 2 as per IEC 60228.

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

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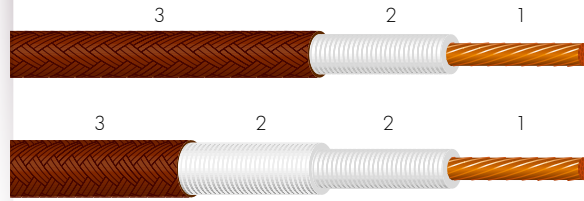
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# SILISOL® 1G and 2G

**-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: 0.75mm<sup>2</sup>.
- Available in 2 standard insulation thicknesses.
- Standard colour: brown.

Flexible core • Class 5 as per IEC 60228			INSULATED WIRE	
Nominal cross-section (mm <sup>2</sup> )	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.

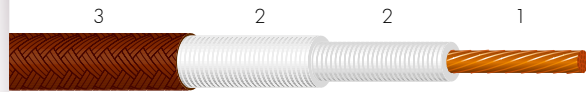
## Applications

- 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

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

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

**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 fiberglass braid.

For implementation purposes, this cable may include one or more fiberglass 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 (mm <sup>2</sup> )	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)
0.22*	7 × 0.20	89.9
0.34*	7 × 0.25	57.5
0.5	16 × 0.20	39.0
0.75	24 × 0.20	26.0
1	32 × 0.20	19.5
1.5	30 × 0.25	13.3
2.5	50 × 0.25	7.98
4	56 × 0.30	4.95
6	84 × 0.30	3.30
10	80 × 0.40	1.91
16	126 × 0.40	1.21
25	196 × 0.40	0.780
35	276 × 0.40	0.554
50	396 × 0.40	0.386
70	360 × 0.50	0.272
95	485 × 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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LES CABLES DE L'EXTREME



**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

- Stranded or flexible nickel-plated copper core – class 2 or 5 as per IEC 60228.
- Impregnated fiberglass lappings.
- Silicone-coated fiberglass 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**

Nominal cross-section (mm <sup>2</sup> )	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)
0.25*	8 x 0.20	87.2
0.5	7 x 0.30	36.7
0.75	11 x 0.30	24.8
1	14 x 0.30	18.2
1.5	21 x 0.30	12.2
2.5	35 x 0.30	7.56
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	543 x 0.40	0.277
95	740 x 0.40	0.210

**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

\* 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.

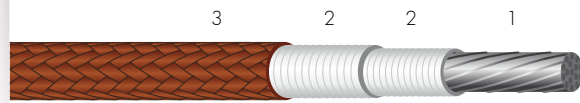
## Applications

- 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

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

### Option • NVSL

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

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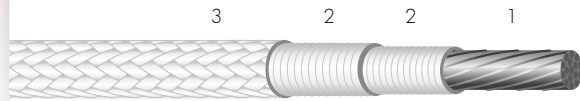
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LES CABLES DE L'EXTREME

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

- |                  |               |             |
|------------------|---------------|-------------|
|                  | <b>NTSD-L</b> | <b>NTSD</b> |
| • 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 (mm <sup>2</sup> )	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 (mm <sup>2</sup> )	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

For this product, please contact:

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LES CABLES DE L'EXTREME

**SILICABLE® CNVAS****-60 °C to +400 °C****Approvals - standards**

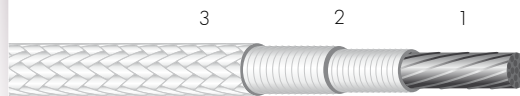
- Nickel-plated copper complying with the 2 % class as per standard ASTM B355.
  - VERITAS approval certificates:
    - > No. BV 153552.
    - > No. BV 256192.

**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.

UNIPOLAR WIRES AND CABLES  
WITH COMPOSITE INSULATION

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

**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**

Nominal cross-section (mm <sup>2</sup> )	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)
0.25*	8 x 0.20	87.2
0.34*	7 x 0.25	63.6
0.5	7 x 0.30	36.7
0.75	11 x 0.30	24.8
1	14 x 0.30	18.2
1.5	21 x 0.30	12.2
2.5	35 x 0.30	7.56
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	543 x 0.40	0.277
95	740 x 0.40	0.210
120	925 x 0.40	0.164
150	1184 x 0.40	0.132
185	1443 x 0.40	0.108
240	1924 x 0.40	0.0817

**INSULATED WIRE OR CABLE**

Nominal diameter (mm)	Approximate linear weight (kg/km)
2.2	7.9
2.3	9.2
2.5	11.1
2.7	14.3
3.2	19.9
3.4	25.6
4.0	36.4
4.5	56.3
5.0	73.9
8.0	149
9.0	225
10.6	321
13.0	442
14.4	576
16.5	827
18.5	1102
20.2	1327
23.0	1741
25.9	2061
27.9	2666

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

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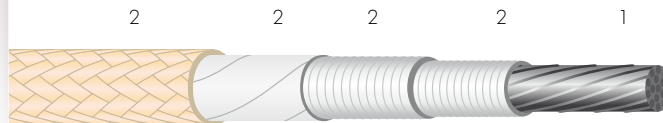
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LES CABLES DE L'EXTREME

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# SILICABLE® 250 °C

## Composite insulation

### UL and cUL approval



- 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 <sup>2</sup> )	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	3.7
-	4	NS	3.8	0.30	3.8
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	(mm <sup>2</sup> )	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	3.4	0.64	3.7	0.69	3.9
-	2.5	0.38	3.5	0.64	3.9	0.69	4.0
12	-	0.38	3.9	0.64	4.2	0.69	4.3
-	4	0.38	4.1	0.64	4.5	0.69	4.7
10	-	0.38	4.7	0.64	5.2	0.69	5.4
-	6	0.38	4.9	0.64	5.6	0.69	5.6
8	-	0.38	6	0.64	6.3	-	-
-	10	0.38	6.3	0.64	6.6	-	-
6	-	0.51	7.2	0.89	8.2	-	-
-	16	0.51	7.7	0.89	8.5	-	-
4	-	0.51	8.6	0.89	9.4	-	-
-	25	0.51	9.1	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	

For this product, please contact:

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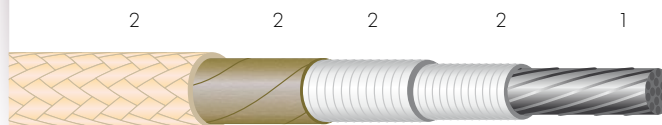
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# SILICABLE® 350 °C

## Composite insulation UL and cUL approval



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

### 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.

Style no.	5294	5285	5304-VW-1
Approval	350 °C – 300 V	350 °C – 300 V	350 °C – 600 V

Nominal cross-section AWG	Nominal diameter* (mm)	Average thickness of insulation (mm)		Nominal diameter* (mm)	
		AWG	(mm <sup>2</sup> )	Thickness	Diameter
30	0.05	-	-	-	-
28	0.09	-	-	-	-
26	0.13	-	-	-	-
24	0.22	0.46	2.2	1.14	2.9
22	0.34	0.46	2.4	1.14	3.0
-	0.5	0.46	2.5	1.14	3.2
20	0.6	0.46	2.6	1.14	3.3
-	0.75	0.46	2.8	1.14	3.4
18	0.93	0.46	2.8	1.14	3.5
-	1	0.46	2.9	1.14	3.6
16	1.34	0.46	3.3	1.14	3.8
-	1.5	0.46	3.4	1.14	3.9
14	-	0.46	3.5	1.14	4.4
-	2.5	0.46	3.9	1.14	4.5
12	-	0.46	4.2	1.14	4.6
-	4	0.46	4.3	1.14	4.9
10	-	0.46	4.9	1.14	6.0
-	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	

#### 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.

For this product, please contact:

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# 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.

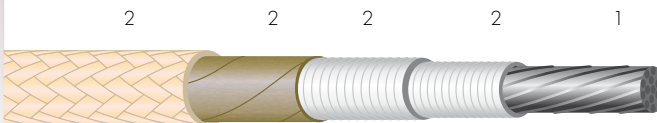
### Applications

- 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	Average thickness of insulation (mm)	Nominal diameter* (mm)	5168		5334		5128	
			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	2.5	0.56	2.6	0.56	2.5	
-	1	0.43	2.6	0.56	2.7	0.56	2.5	
16	1.34	0.43	2.7	0.56	2.9	0.56	2.8	
-	1.5	0.43	2.8	0.56	3.0	0.56	2.8	
14	-	0.43	3.7	0.56	3.2	0.56	3.1	
-	2.5	0.43	3.8	0.56	3.4	0.56	3.3	
12	-	0.43	4	0.56	3.7	0.56	4.2	
-	4	0.43	4.1	0.56	4.0	0.56	4.4	
10	-	0.89	5.3	0.76	4.9	0.89	5.4	
-	6	0.89	5.4	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	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.

For this product, please contact:

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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 <sup>2</sup> )	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	3.3	0.81	3.4	1.57	5.3
-	1.5	0.71	3.4	0.81	3.4	1.57	5.5
14	-	0.71	3.5	0.81	3.9	1.57	5.7
-	2.5	0.71	3.9	0.81	3.9	1.57	5.9
12	-	0.71	4.1	0.81	4.3	1.57	6.1
-	4	0.71	4.2	0.81	4.4	1.57	6.4
10	-	0.94	5.5	1.14	5.9	1.57	6.8
-	6	0.94	5.6	1.14	6.0	1.57	7.2
8	-	0.94	6.6	1.14	6.6	2.08	8.9
-	10	0.94	6.7	1.14	7.0	2.08	9.1
6	-	0.94	7.6	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	9.6	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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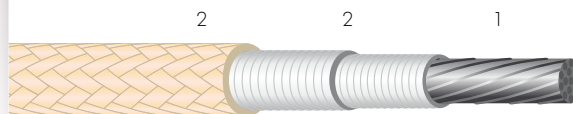


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# SILICABLE® 550 °C

## Composite insulation

### UL approval



- 1 • Nickel or nickel-plated copper 27% core.
- 2 • Composite insulation: mica + fiberglass lappings + varnished fiberglass braid.

### Characteristics

#### General

- Maximum continuous operating temperature: +550 °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: white.
- Stranding of conducting cores: contact us.

#### Approvals - standards

- UL approval as per standard UL 758 – File no.: E101965.
  - VW-1 flame test as per UL 758.
- 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.

#### 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.
- Others sections and metric sections: contact us.

### Style no. 5400 - VW-1 5390 - VW-1

Approval	550 °C – 600 V		550 °C – 300 V		
	Nominal cross-section AWG (mm <sup>2</sup> )	Average thickness of insulation (mm)	Average thickness of insulation (mm)	Average thickness of insulation (mm)	Nominal diameter* (mm)
	24	0.81	2.9	0.635	2.2
	22	0.81	3	0.635	2.3
	20	0.81	3.2	0.635	2.5
	18	0.81	3.5	0.635	2.8
	16	0.81	3.9	0.635	3.2
	14	0.81	4.2	0.635	3.5
	12	0.81	4.6	0.635	3.9
	10	1.14	6.5	0.84	5.8
	9	1.14	6.7	0.84	6
	8	1.14	7	0.84	6.3
	7	1.14	7.5	0.84	6.8
	6	1.14	8.1	0.84	7.4
	5	1.14	8.7	0.84	8.0
	4	1.14	9.4	0.84	8.7

Conducting metal

EG

EG

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#### 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

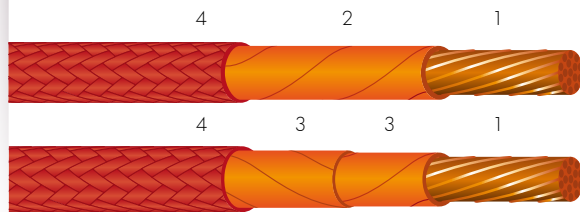
\* The diameter is provided for information purposes as it may vary depending on the stranding of the core. Only the average thickness of insulation should be taken into account.

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# SILICABLE® KVS and 2KVS

-100 °C to +350 °C

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.

## 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.

## 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			INSULATED WIRE OR CABLE		
Nominal cross-section (mm <sup>2</sup> )	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Nominal diameter (mm)		Approximate linear weight (kg/km)
			KVS	2KVS	
0.22*	7 x 0.20	89.9	1	1.2	3.1
0.34*	7 x 0.25	57.5	1.1	1.3	5.7
0.5*	7 x 0.30	39.6	1.2	1.4	6.3
0.6**	19 x 0.20	32.8	1.3	1.5	7.1
0.75	24 x 0.20	26.0	1.4	1.6	8.5
1	32 x 0.20	19.5	1.5	1.7	10.8
1.5	30 x 0.25	13.3	1.9	2.1	15.3
2.5	50 x 0.25	7.98	2.4	2.6	24.1
4	56 x 0.30	4.95	3.1	3.3	38.4
6	84 x 0.30	3.30	3.7	3.9	56.3
10	80 x 0.40	1.91	5	5.2	106
16	126 x 0.40	1.21		6.3	192
25	196 x 0.40	0.780		7.8	288
35	276 x 0.40	0.554		8.8	385
50	396 x 0.40	0.386		10.6	556
70	360 x 0.50	0.272		12.8	785
95	485 x 0.50	0.206		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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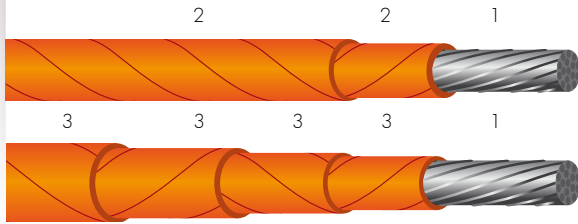
**omerin**  
LES CABLES DE L'EXTREME

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

# SILICABLE® CN2K and CN4K

-190 °C to +250 °C

UNIPOLAR WIRES AND CABLES  
WITH COMPOSITE INSULATION



### 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.

### 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 cross-section (1) (mm²)	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Nominal diameter (mm)		Approximate linear weight (kg/km)
			CN2K	CN4K	
0.14**	7 x 0.16	152	0.8	1.1	1.9
0.22*	7 x 0.20	99.4	0.9	1.2	2.8
0.25**	8 x 0.20	87.2	1.0	1.3	2.9
0.34*	7 x 0.25	63.6	1.0	1.3	3.8
0.4*	19 x 0.16	58.0	1.1	1.4	4.2
0.5*	7 x 0.30	43.8	1.2	1.5	5.3
0.6*	19 x 0.20	36.3	1.3	1.6	6.3
0.75	24 x 0.20	28.7	1.5	1.8	7.7
0.93*	19 x 0.25	23.2	1.6	1.9	9.5
1	32 x 0.20	21.5	1.6	1.9	10.1
1.34*	19 x 0.30	16.1	1.8	2.1	13.4
1.5	30 x 0.25	14.7	1.9	2.2	14.6
1.91*	27 x 0.30	11.3	2.2	2.5	23.8
2.5	50 x 0.25	8.21	2.3	2.6	24.7
4	56 x 0.30	5.09	2.9	3.2	37.8
6	84 x 0.30	3.39	3.5	3.8	56.1
10	80 x 0.40	1.95	4.7	5.0	90.8
16	126 x 0.40	1.24		6.0	157
25	196 x 0.40	0.795		7.4	254
35	276 x 0.40	0.565		8.8	353
50	396 x 0.40	0.394		10.6	512

For this product, please contact:

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(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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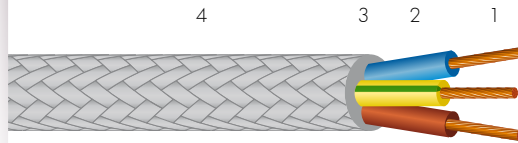
## MULTI-CONDUCTOR WIRES AND CABLES WITH COMPOSITE INSULATION

FT No.	PRODUCT REFERENCE	APPROVAL	PAGE
<b>3201</b>	SILICABLE MV-CS		32
<b>3202</b>	SILICABLE MV-VS		34
<b>3203</b>	SILICABLE MA-CNVS		36
<b>3204</b>	SILICABLE BM-NVS		38
<b>3205</b>	SILICABLE MA-CNVAS		40
<b>3206</b>	SILICABLE MA-NVAS		42



# SILICABLE® MV-CS

-60 °C to +200 °C



- 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	Standard conductor colours	
	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 > mm<sup>2</sup> (example: 3 X 1.5 mm<sup>2</sup>).

Multi-conductor cables with an earth wire are identified by the symbol G in the place of the X (example 3 G 1.5 mm<sup>2</sup>).

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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 <sup>2</sup> )	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



**SILICABLE® MV-VS****-60 °C to +280 °C****Approvals - standards**

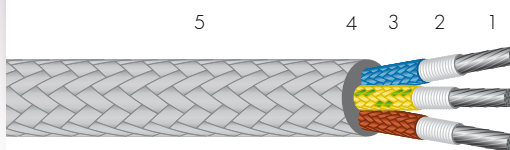
- Halogen-free: IEC 60754-1 / EN 50267-2-1.
  - Fire retardant: NF C 32-070 test C1.
- Resistance to vertical flame propagation for an insulated cable: IEC 60332-1-2 / EN 50265-2-1 NF C 32-070 test C2.
  - VERITAS approval certificate: > No. BV.153552.
  - > No. BV.256096 - 2 hours at 400°C.

**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 fibreglass lappings.
- 3 • Silicone-coated fibreglass braid.
- 4 • Fillers optional, not shown.
- 5 • Silicone-coated fibreglass 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 fibreglass tape or other separating tape under the outer braid.

**Standard conductor colours**

Number of conductors	Standard conductor colours	
	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 > mm<sup>2</sup> (example: 3 X 1.5 mm<sup>2</sup>).

Multi-conductor cables with an earth wire are identified by the symbol G in the place of the X (example 3 G 1.5 mm<sup>2</sup>).

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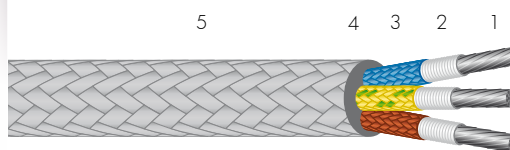
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For an optimum use of the cables produced by our company, we recommend testing in real conditions. Our sales department is available for a possible provision of samples, and/or for the conditions of a complete study in our laboratories.

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**Flexible core – Class 5 as per IEC 60228**
**INSULATED CONDUCTORS**
**SHEATHED CABLE**

Nominal cross-section (mm <sup>2</sup> )	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

**SILICABLE® MA-CNVS****-60 °C to +350 °C**MULTI-CONDUCTOR WIRES AND CABLES  
WITH COMPOSITE INSULATION**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.

- 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.

**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	Standard conductor colours	
	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 > mm<sup>2</sup> (example: 3 X 1.5 mm<sup>2</sup>).

Multi-conductor cables with an earth wire are identified by the symbol G in the place of the X (example 3 G 1.5 mm<sup>2</sup>).

For this product, please contact:

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**omerin**  
LES CABLES DE L'EXTREME

## Conducting core

## INSULATED CONDUCTORS

## SHEATHED CABLE

Nominal cross-section (mm <sup>2</sup> )	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

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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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**SILICABLE® BM-NVS****-60 °C to +350 °C****Approvals - standards**

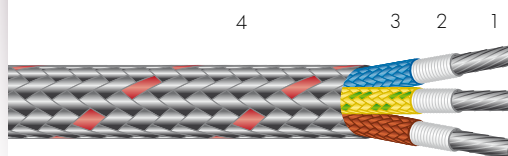
- Nickel type 200, as per standards ASTM B160, DIN 17753 and DIN 17740.
- Halogen-free: IEC 60754-1 / EN 50267-2-1.
  - Resistance to vertical flame propagation for an insulated cable: IEC 60332-1-2 / EN 50265-2-1 / NF C 32-070 test C2.
- VERITAS approval certificate No. BV.153552.

**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 fiberglass lappings.
- 3 • Silicone-coated fiberglass 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 fiberglass 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 <sup>2</sup> )	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


For this product, please contact:

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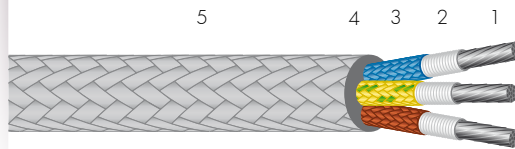
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**SILICABLE®  
MA-CNVAS****-60 °C to +400 °C**MULTI-CONDUCTOR WIRES AND CABLES  
WITH COMPOSITE INSULATION

- 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.

**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.

**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	Standard conductor colours	
	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 > mm<sup>2</sup> (example: 3 X 1.5 mm<sup>2</sup>).

Multi-conductor cables with an earth wire are identified by the symbol G in the place of the X (example 3 G 1.5 mm<sup>2</sup>).

For this product, please contact:

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## Conducting core

## INSULATED CONDUCTORS

## SHEATHED CABLE

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

**SILICABLE®  
MA-NVAS****-60 °C to +450 °C****Approvals - standards**

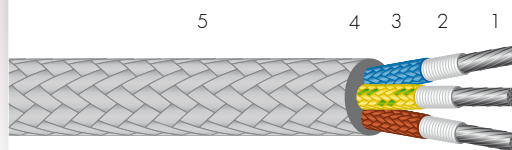
- Nickel type 200, as per standards ASTM B160, DIN 17753 and DIN 17740.
- Halogen-free: IEC 60754-1 / EN 50267-2-1.
  - Fire retardant: NF C 32-070 test C1.
  - Resistance to vertical flame propagation for an insulated cable: IEC 60332-1-2 / EN 50265-2-1 NF C 32-070 test C2.
- VERITAS approval certificate 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.



- 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.

For this product, please contact:

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## Conducting core

## INSULATED CONDUCTORS

## SHEATHED CABLE

Nominal cross-section (mm <sup>2</sup> )	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
<b>3301</b>	SILIFLAM THS - OVERVIEW	46
<b>3302</b>	SILIFLAM THS 1000 SERIES	48
<b>3303</b>	SILIFLAM THS 1200 SERIES	50
<b>3304</b>	SILIFLAM THS 1400 SERIES	52
<b>3305</b>	SILIFLAM THS 1500 SERIES	54



# SILIFLAM® THS

## Very high safety cables for industrial applications

### + 400 °C to + 1400 °C <sup>(1)</sup>

#### 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 <sup>(1)</sup>

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.

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LES CABLES DE L'EXTREME

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The information provided in this technical data sheet is indicative and may be modified without prior notice, laying, wiring and electrical conditions and the environment of the cable can not be fully considered in our studies. In no way the company OMERIN shall be held responsible for any incidents in the case of inappropriate uses, particularly in the case of wiring conditions that do not respect the good practice and the standards in force. 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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#### 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.

## Standard products

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

- Single-conductor: 0.22 mm<sup>2</sup> to 400 mm<sup>2</sup>.
- Multi-conductor: > 0.22 mm<sup>2</sup> to 2.5 mm<sup>2</sup>: 2 to 37 conductors.  
> 4 to 6 mm<sup>2</sup>: 2 to 19 conductors.  
> 10 to 95 mm<sup>2</sup>: 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.).

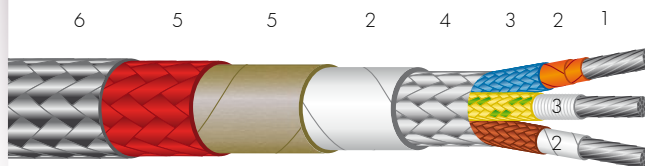
U: unipolar (except THS 1000 series) / M: multi-conductor.

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

BI (optional): stainless steel outer shielding.

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# SILIFLAM® THS 1000



- 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.

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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 <sup>2</sup> )	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Nominal diameter of the conductor (mm)	Approximate diameter <sup>(1)</sup> 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 ( $\pm 2$  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.

# SILIFLAM® THS 1200

## Approvals - standards

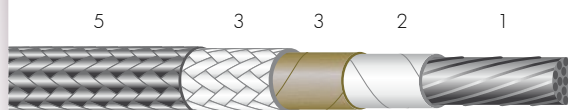
- Nickel-plated copper complying with the 2% or 27% class as per standard ASTM B355.

## Applications

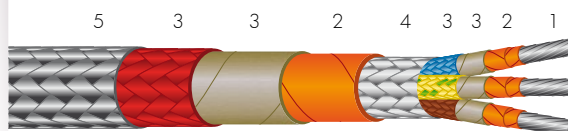
- See range presentation sheet (FT 3301).  
The THS 1200 series is recommended for zones subject to very high temperature peaks (flames, falling slag, etc.) and high continuous operating temperatures.

## 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.

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Conducting core

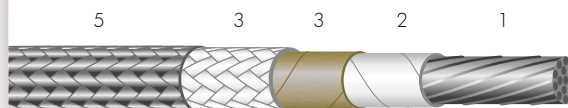
INSULATED CONDUCTORS

SHEATHED CABLE

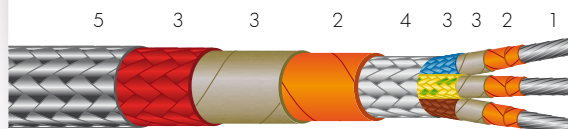
Nominal cross-section (mm <sup>2</sup> )	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Approximate diameter <sup>(1)</sup> of single conductors (THS 1200 M version) (mm)	Approximate diameter <sup>(1)</sup> of cable (THS 1200 U and 1200 M version) (mm)
<b>THS 1200 U</b>				
1 x 0.5	7 x 0.30	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
<b>THS 1200 M</b>				
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 ± 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.

## SILIFLAM® THS 1400

VERY HIGH SAFETY CABLES  
FOR INDUSTRIAL APPLICATIONS

THS 1400 U



THS 1400 M

## 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.

For this product, please contact:

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## Conducting core

## INSULATED CONDUCTORS

## SHEATHED CABLE

Nominal cross-section (mm <sup>2</sup> )	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Approximate diameter <sup>(1)</sup> of single conductors (THS 1400 M version) (mm)	Approximate diameter <sup>(1)</sup> of cable (THS 1400 U and THS 1400 M version) (mm)
<b>THS 1400 U</b>				
1 x 0.5	7 x 0.30	229	-	2.2
1 x 0.75	11 x 0.30	156	-	2.6
1 x 1	14 x 0.30	115	-	3.0
1 x 1.5	21 x 0.30	77.2	-	3.2
1 x 2.5	35 x 0.30	47.2	-	3.8
1 x 4	56 x 0.30	31.5	-	4.5
1 x 6	84 x 0.30	21.0	-	5.0
<b>THS 1400 M</b>				
2 x 0.5	7 x 0.30	229	2.2	6.1
3 x 0.5	7 x 0.30	229	2.2	6.4
4 x 0.5	7 x 0.30	229	2.2	6.9
5 x 0.5	7 x 0.30	229	2.2	7.7
7 x 0.5	7 x 0.30	229	2.2	8.3
2 x 0.75	11 x 0.30	156	2.6	6.8
3 x 0.75	11 x 0.30	156	2.6	7.0
4 x 0.75	11 x 0.30	156	2.6	7.7
5 x 0.75	11 x 0.30	156	2.6	8.4
7 x 0.75	11 x 0.30	156	2.6	9.1
2 x 1	14 x 0.30	115	3.0	7.7
3 x 1	14 x 0.30	115	3.0	8.2
4 x 1	14 x 0.30	115	3.0	8.9
5 x 1	14 x 0.30	115	3.0	9.8
7 x 1	14 x 0.30	115	3.0	10.6
2 x 1.5	21 x 0.30	77.2	3.2	8.0
3 x 1.5	21 x 0.30	77.2	3.2	8.5
4 x 1.5	21 x 0.30	77.2	3.2	9.2
5 x 1.5	21 x 0.30	77.2	3.2	10.2
7 x 1.5	21 x 0.30	77.2	3.2	11.2
2 x 2.5	35 x 0.30	47.2	3.8	9.1
3 x 2.5	35 x 0.30	47.2	3.8	9.6
4 x 2.5	35 x 0.30	47.2	3.8	10.7
2 x 4	56 x 0.30	31.5	4.5	10.6
3 x 4	56 x 0.30	31.5	4.5	11.2
4 x 4	56 x 0.30	31.5	4.5	12.5
2 x 6	84 x 0.30	21.0	5.0	11.6
3 x 6	84 x 0.30	21.0	5.0	12.4
4 x 6	84 x 0.30	21.0	5.0	13.7

(1) the diameters stated are approximate. They can vary substantially ( $\pm 2$  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.

For this product, please contact:

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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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## SILIFLAM® THS 1500

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 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.

For this product, please contact:

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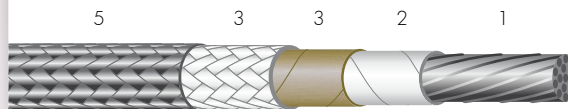
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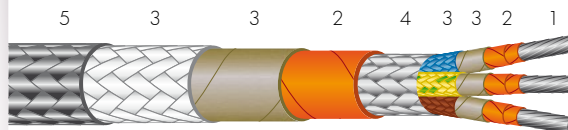
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For an optimum use of the cables produced by our company, we recommend testing in real conditions. Our sales department is available for a possible provision of samples, and/or for the conditions of a complete study in our laboratories.  
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THS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



## Conducting core

## INSULATED CONDUCTORS

## SHEATHED CABLE

Nominal cross-section (mm <sup>2</sup> )	Nominal stranding	Maximum linear resistance at 20 °C (Ω/km)	Approximate diameter <sup>(1)</sup> of single conductors (THS 1500 M version) (mm)	Approximate diameter <sup>(1)</sup> of cable (THS 1500 U and THS 1500 M version) (mm)
<b>THS 1500 U</b>				
1 x 0.5	7 x 0.30	229	-	2.2
1 x 0.75	11 x 0.30	156	-	2.6
1 x 1	14 x 0.30	115	-	3.0
1 x 1.5	21 x 0.30	77.2	-	3.2
1 x 2.5	35 x 0.30	47.2	-	3.8
1 x 4	56 x 0.30	31.5	-	4.5
1 x 6	84 x 0.30	21.0	-	5.0
<b>THS 1500 M</b>				
2 x 0.5	7 x 0.30	229	2.2	6.1
3 x 0.5	7 x 0.30	229	2.2	6.4
4 x 0.5	7 x 0.30	229	2.2	6.9
5 x 0.5	7 x 0.30	229	2.2	7.7
7 x 0.5	7 x 0.30	229	2.2	8.3
2 x 0.75	11 x 0.30	156	2.6	6.8
3 x 0.75	11 x 0.30	156	2.6	7.0
4 x 0.75	11 x 0.30	156	2.6	7.7
5 x 0.75	11 x 0.30	156	2.6	8.4
7 x 0.75	11 x 0.30	156	2.6	9.1
2 x 1	14 x 0.30	115	3.0	7.7
3 x 1	14 x 0.30	115	3.0	8.2
4 x 1	14 x 0.30	115	3.0	8.9
5 x 1	14 x 0.30	115	3.0	9.8
7 x 1	14 x 0.30	115	3.0	10.6
2 x 1.5	21 x 0.30	77.2	3.2	8.0
3 x 1.5	21 x 0.30	77.2	3.2	8.5
4 x 1.5	21 x 0.30	77.2	3.2	9.2
5 x 1.5	21 x 0.30	77.2	3.2	10.2
7 x 1.5	21 x 0.30	77.2	3.2	11.2
2 x 2.5	35 x 0.30	47.2	3.8	9.1
3 x 2.5	35 x 0.30	47.2	3.8	9.6
4 x 2.5	35 x 0.30	47.2	3.8	10.7
2 x 4	56 x 0.30	31.5	4.5	10.6
3 x 4	56 x 0.30	31.5	4.5	11.2
4 x 4	56 x 0.30	31.5	4.5	12.5
2 x 6	84 x 0.30	21.0	5.0	11.6
3 x 6	84 x 0.30	21.0	5.0	12.4
4 x 6	84 x 0.30	21.0	5.0	13.7

(1) the diameters stated are approximate. They can vary substantially ( $\pm 2$  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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