



**Caledonian**

# High Temperature Cables

[www.caledonian-cables.co.uk](http://www.caledonian-cables.co.uk)

[www.addison-cables.com](http://www.addison-cables.com)



**Addison**





# Company Profile

Caledonian, established in 1978, offers one of the most complete lines of fiber and copper cabling system solutions with over hundreds of different cabling system products. Our superior products provide leading edge within every cable series and for every application.

Among the national and international standards with which our cables could comply are: BS - British Standard; LPCB Fire Performance Standard. ISO Standard etc. Caledonian Cables offers a comprehensive stock of cables and cabling products through its nationwide network of resellers and distributors. Caledonian Cables has continually expanded its global presence in Europe and Asia.

Caledonian & Addison, produces a wide range of cables for communication, power and electronics in its primary plants in UK, Italy and Spain. To stay in front, we continually keep expanding our manufacturing capabilities in more low cost region such as Romania, Taiwan, Malaysia etc. This low-cost manufacturing facilities enable us provide a flexible, scalable global system that delivers superior operational performance and optimal results for our customers.

Our extensive global network of manufacturing facilities gives us significant scale and the flexibility to fulfill our customer requirements. This global presence provides design and consultancy solutions that are combined with core cable manufacturing, logistic services, and vertically integrated with our E-commerce technologies, to optimize customer operations by lowering costs and reducing time to market.

Caledonian & Addison has been respected for its high standards of quality, excellent service level, competitive pricing and a unique and innovative spirit. With our latest technologies, we are both inspired and well-positioned to meet the changing needs of our customers. We have the resources to diversify and to enhance our product lines and services. We understand the need for change and with our accurate planning, we are ready for the future and the promise of new marketing opportunities. Our tradition of growth through excellence is assured.

Our Design Centers work closely with customers to constantly improve its standard range of products and technologies and to develop customized, country and industry-specific solutions. Caledonian & Addison has established an extensive network of design, manufacturing, and logistics facilities in the world's major markets to serve the growing outsourcing needs of both multinational and regional customers.



# Our Certificate

INTERNATIONAL FIRST CERTIFICATION



INTERNATIONAL FIRST CERTIFICATION

## CERTIFICATE

**Caledonian Cables Limited**

20-22 Wenlock Road London N1 7GU England  
Novus Seahami Spectrum 7 Spectrum Business Park Seaham SR7 7tt, England

IFC Global Certification confirms that the above-named organization's management system has been assessed and complies with the requirements of the following standard.

Standard:

**ISO 9001:2015**

Scope:

Manufacture, desing, supply, installation, assembly, commissioning, testing and maintenance of LV/MV/HV energy cables, data cables, instrumentation cables, telecommunication cables, fibre optic cables, railway cables, rolling stock cables, photovoltaic cables, marine cables, cabling system, cable accessories, ABC, AAC, ACSR, AAAC, power and distribution transformers, switchgears, communication systems, IT systems

Initial Date : 1.02.2024  
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TÜRKAK BDS NO  
YS-7B43-3448



Approval

IFC GLOBAL SERTİFİKASYON MUAYENE VE EĞİTİM HİZMETLERİ ANONİM ŞİRKETİ

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## SIF



### Product application:

Suitable where PVC insulated cables become brittle due to high temperature variations. Silicone insulated single cores are preferably used in the metallurgical industry, steel works, hot rolling mills, coking plants, foundries etc. Insulation consists of silicone rubber. It is resistant to vegetable and animal fat, many types of oil and diluted acids. No decomposition occurs when exposed to alcohol, alkaline solutions, etc. The insulation is resistant to oxygen and ozone. Should the cable burn, an insulation silicone dioxide layer will remain on the conductor to render it short circuit proof.

### Product characteristic:

#### Construction:

- Fine tinned copper strands
- Strands to VDE-0295 Class-5, IEC 60228 CI-5
- Silicone core insulation
- Cores to VDE-0293

#### Technical:

- Working voltage: 300/500 volts
- Test voltage: 2000 volts
- Bending Radius: 15 x Ø
- Temp range: -50° C to +180° C
- Short time temp up to +220° C
- Flame retardant: IEC 60332.1
- Insulation resistance: 20 MΩ x km

#### Properties:

- Advantages  
High ignition or flash point



- Resistant to High molecular oils, fats from vegetables and animals, alcohols, plasticizers and clophenes, diluted acids, lye and salt dissolution, oxidation substances, tropical influences and weather, lake water, oxygen
- Halogen-free  
According to DIN VDE 0482 part 267/ EN 50267-2-1/ IEC 60754-1 (equivalent DIN VDE 0472 part 815)
- Behavior in fire  
No flame propagation  
Test according to DIN VDE 0482 part 265-2-1/ EN 50265-2-1/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- For laying as a fixed installation only in open or ventilated pipe systems as well as in ducts.  
Otherwise the mechanical properties of the silicon are reduced by the enclosed air at temperatures exceeding 90°C.

### Product specification:

AWG	No. of Cores	Conductor cross section mm <sup>2</sup>	Nominal OD mm	Copper weight kg/km	Gross Weight kg/km
24	1	0.25	1.9	2.4	5.5
20	1	0.5	2.1	4.8	8.6
18	1	0.75	2.4	7.2	11.8
17	1	1	2.5	9.6	13.5
16	1	1.5	2.8	14.4	18.5
14	1	2.5	3.4	24	30
12	1	4	4.2	38	47.3
10	1	6	5.2	58	71.1
8	1	10	7.1	96	119.4
6	1	16	8.4	154	187.7
4	1	25	10.3	240	289.6
2	1	35	11.6	336	398.3
1	1	50	13.9	480	559.7
2/0	1	70	16.0	672	765.8
3/0	1	95	18.4	912	1031.5
4/0	1	120	20.0	1152	1284.6
300kcmil	1	150	23.0	1440.0	1563.4
350 kcmil	1	185	24.9	1776.0	1858.2



## SIF / GL



### Product application:

Suitable where PVC insulated cables become brittle due to high temperature variations. Silicone insulated single cores are preferably used in the metallurgical industry, steel works, hot rolling mills, coking plants, foundries etc. Insulation consists of silicone rubber. It is resistant to vegetable and animal fat, many types of oil and diluted acids. No decomposition occurs when exposed to alcohol, alkaline solutions, etc. The insulation is resistant to oxygen and ozone. Should the cable burn, an insulation silicone dioxide layer will remain on the conductor to render it short circuit proof. Additional mechanical protection due to the glass fibre braid.

### Product characteristic:

#### Construction:

- Fine strands of tinned copper wire
- Stranding acc. to VDE 0295 class 5
- Core insulation made of silicone rubber
- Glass fibre braiding
- Bending radius: 15x cable Ø

#### Technical:

- Special silicone single conductor cable with higher heat-resistance range adapted to DIN VDE 0250 part 1 and part 502
- Temperature range : -60°C to +180°C
- Short time temp up to 220°C
- Temperature limit at the conductor in operation +180°C



- Nominal voltage:300/500 V
- Test voltage :2000 V
- Minimum bending radius: 15x cable Ø
- Radiation resistance : up to  $20 \times 10^6$  cJ/kg (up to 20 Mrad)

### Properties:

- High ignition or flash point
- Resistant to high molecular oils, fats from vegetables and animals, alcohols, plasticizers and clophenes, diluted acids, lye and salt dissolution, oxidation substances, tropical influences and weather, lake water, oxygen
- Halogen-free according to DIN VDE 0482 part 267/ EN 50267-2-1/ IEC 60754-1 (equivalent DIN VDE 0472 part 815)
- No flame propagation  
Test according to DIN VDE 0482 part 265-2-1/ EN 50265-2-1/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- For laying as a fixed installation only in open or ventilated pipe systems as well as in ducts  
Otherwise the mechanical properties of the silicon are reduced by the enclosed air at temperatures exceeding 90°C

### Product specification:

AWG	No. of Cores	Conductor Cross Section mm <sup>2</sup>	Nominal OD mm	Copper weight kg / km	Gross Weight kg / km
24	1	0.25	2.4	2.4	7.9
20	1	0.5	2.6	4.8	12.6
18	1	0.75	2.9	7.2	16
17	1	1	3	9.6	18.4
16	1	1.5	3.3	14.4	23.7
14	1	2.5	3.9	24	35.6
12	1	4	4.7	38	53.3
10	1	6	5.7	58	77.4
8	1	10	7.5	96	129.2
6	1	16	8.9	154	198.4
4	1	25	10.8	240	303
2	1	35	12.1	336	413.2
1	1	50	14.4	480	577.8



### SIHF



#### Product application:

Suitable where PVC insulated cables become brittle due to high temperature variations. Silicone insulated single cores are commonly used in the metallurgical industry, steel works, hot rolling mills, coking plants, foundries etc. The insulation consists of silicone rubber. It is resistant to vegetable and animal fat, many types of oil and diluted acids. No decomposition occurs when exposed to alcohol, alkaline solutions etc. The insulation is resistant to oxygen and ozone. Should the cable burn, a silicone dioxide layer will remain on the conductor to render it short circuit proof.

#### Product characteristic:

##### Construction:

- Tinned copper conductors to DIN VDE 0295 cl. 5, BS 6360 cl. 5 and IEC 60228 cl. 5
- Silicone conductor insulation
- Conductor identification to DIN VDE 0293-308 color coded or black conductors with continuous white numbers
- For 2-conductors brown, blue
- Conductors stranded in layers with optimal lay-length
- Green-yellow earth-conductor (3 conductors and above)
- Outer jacket of silicone

##### Technical:

- Special silicone multi conductor cable with higher heat-resistance range adapted to DIN VDE 0250 part 1 and part 816
- Working voltage: 300/500 volts
- Test voltage: 2000 volts
- Bending Radius: flexing 7.5 x cable Ø, fixed installation 4 x cable Ø
- Temp range: -60° C to +180° C
- Short time temp up to +220° C



- Flame retardant: IEC 60332.1
- Insulation resistance: min. 200 MΩ x km
- Radiation resistance: up to  $20 \times 10^6$  cJ/kg (up to 20 Mrad)

### Properties:

- Hardly changes of dielectric strength and the insulation resistance also at high temperatures, high ignition or flash point, in case of fire, forms an insulating layer of  $\text{SiO}_2$
- Resistant to high molecular oils, fats from vegetables and animals, alcohols, plasticizers and clophenes, diluted acids, lye and salt dissolution, oxidation substances, tropical influences and weather, lake water, oxygen and UV
- Halogen-free according to DIN VDE 0482 part 267/ EN 50267-2-2/ IEC 60754-2 (equivalent DIN VDE 0472 part 813)
- No flame propagation  
Test according to DIN VDE 0482 part 265-2-1/ EN 50265-2-1/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- For laying as a fixed installation only in open or ventilated pipe systems as well as in ducts.  
Otherwise the mechanical properties of the silicon are reduced by the enclosed air at temperatures exceeding  $90^\circ\text{C}$ .

### Product specification:

AWG	No. of Cores	Conductor cross section $\text{mm}^2$	Nominal OD mm	Copper weight kg/km	Gross Weight kg/km
20	2	0.5	5.5	9.6	42
20	3	0.5	5.8	14.5	44
20	4	0.5	6.2	19.3	58
20	5	0.5	6.8	24	62
20	6	0.5	7.4	28.9	79
20	7	0.5	7.4	33.7	85
20	8	0.5	8.6	38.4	99
20	10	0.5	9.5	48.1	124
20	12	0.5	9.8	57.6	141
20	16	0.5	11	76.7	186
20	18	0.5	11.5	86.5	211
20	25	0.5	13.7	120	271
18	2	0.75	6.4	14.4	53



## High Temperature Silicone Cables

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AWG	No. of Cores	Conductor cross section mm <sup>2</sup>	Nominal OD mm	Copper weight kg/km	Gross Weight kg/km
18	3	0.75	6.8	21.6	63
18	4	0.75	7.8	29	83
18	5	0.75	8.5	36	101
18	6	0.75	9.2	43	115
18	7	0.75	9.2	50	124
18	8	0.75	9.7	57.7	138
18	10	0.75	10.9	72.1	156
18	12	0.75	11.1	86.5	185
18	16	0.75	12.6	115.2	218
18	18	0.75	13.3	129.7	260
18	25	0.75	15.6	180	370
17	2	1	6.6	19	59
17	3	1	7.4	29	77
17	4	1	8	38	94
17	5	1	8.8	48	115
17	6	1	9.5	58	134
17	7	1	9.5	67	144
17	8	1	10.4	76.7	175
17	10	1	11.3	96.1	216
17	12	1	11.5	115.2	231
17	16	1	13.1	153.5	302
17	18	1	13.8	172.9	340
17	25	1	16.2	240	431
16	2	1.5	7.6	29	81
16	3	1.5	8	43	98
16	4	1.5	8.8	58	122
16	5	1.5	9.6	72	147
16	6	1.5	10.4	86	173
16	7	1.5	10.4	101	187
16	8	1.5	11.6	114	213
16	10	1.5	13.6	116	263
16	12	1.5	14.6	173	314
16	14	1.5	15.4	202	379
16	16	1.5	16.7	231	445
16	18	1.5	17.6	260	506
16	20	1.5	18.2	288	566
16	24	1.5	20	346	722



AWG	No. of Cores	Conductor cross section mm <sup>2</sup>	Nominal OD mm	Copper weight kg/km	Gross Weight kg/km
14	2	2.5	9.2	48	134
14	3	2.5	9.7	72	152
14	4	2.5	10.6	96	188
14	5	2.5	11.6	120	228
14	6	2.5	12.9	144	304
14	7	2.5	13	168	320
14	8	2.5	14.9	192.2	373
14	10	2.5	16.5	240.1	450
14	12	2.5	17.8	288	502
14	16	2.5	19.1	384	659
14	18	2.5	20	432	761
14	25	2.5	24.5	600	1007
12	2	4	10.8	77	180
12	3	4	11.4	115	224
12	4	4	13.1	154	295
12	5	4	14.4	192	359
12	7	4	16.2	269	479
10	2	6	13.4	115	274
10	3	6	14.2	173	338
10	4	6	16.2	230	441
10	5	6	17.7	288	535
10	7	6	19.2	403	685
8	2	10	17.6	192	400
8	3	10	18.7	288	620
8	4	10	20.4	384	707
8	5	10	22.5	480	900
8	7	10	24.4	672.2	1151
6	2	16	20.4	308	400
6	3	16	22	462	500
6	4	16	24.3	616	714
6	5	16	26.7	770	850
6	7	16	27.6	1075.3	1682
4	2	25	24.6	480	700
4	3	25	26.2	720	1100
4	4	25	31.8	960	1500
2	2	35	28.2	672	1100
2	3	35	29.9	1008	1500
2	4	35	32.8	1344	2100



### SiHF-GLP



#### Product application

SiHF-GLP is a special 180 Degree C. silicone multi-core cable with an overall steel braid for use in high and low temperature areas or whenever the insulation is subject to extreme temperature changes. These cables are mainly found in steel producing industry and aviation industry as well as in ship building, cement, glass and ceramic factories. SiHF-GLP cables are low-smoke and halogen-free especially suited for use in power stations. The silicone jacket provides added heat, chemical, oil and acidic resistance. The external galvanized steel braid ensures excellent mechanical protection and disturbance-free transmissions of signals and impulses. Not permitted for outdoor use.

#### Product characteristic:

##### Construction:

- Tinned copper conductors to DIN VDE 0295 cl. 5, BS 6360 cl. 5 and IEC 60228 cl. 5
- Silicone conductor insulation
- Conductor identification to DIN VDE 0293-308 color coded or black conductors with continuous white numbers
- For 2-conductors brown, blue
- Conductors stranded in layers with optimal lay-length
- Green-yellow earth-conductor (3 conductors and above)
- Outer jacket of silicone
- Jacket color preferably red brown
- Glass fibre tape over the jacket
- Stainless steel wire outer braiding



### Technical:

- Special silicone multi conductor cable with higher heat-resistance range adapted to DIN VDE 0250 part 1 and part 816
- Temperature range: -60°C to +180°C
- Short time temp up to +220° C
- Temperature limit at the conductor in operation +180°C
- Nominal voltage : 300/500 V
- Test voltage :2000 V
- Insulation resistance: min.200 MΩ x km
- Minimum bending radius: flexing 10 x cable Ø  
fixed installation 5 x cable Ø
- Radiation resistance :up to 20x10<sup>6</sup> cJ/kg (up to 20 Mrad)

### Properties

- Advantages  
Hardly changes of dielectric strength and the insulation resistance also at high temperatures, high ignition or flash point, in case of fire, forms an insulating layer of SiO<sub>2</sub>
- Resistant to  
High molecular oils, fats from vegetables and animals, alcohols, plasticizers and clophenes, diluted acids, lye and salt dissolution, oxidation substances, tropical influences and weather, lake water, oxygen
- Halogen-free  
According to DIN VDE 0482 part 267/ EN 50267-2-2/ IEC 60754-2 (equivalent DIN VDE 0472 part 813)
- Behavior in fire  
No flame propagation  
Test according to DIN VDE 0482 part 265-2-1/ EN 50265-2-1/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- For laying as a fixed installation only in open or ventilated pipe systems as well as in ducts.  
Otherwise the mechanical properties of the silicon are reduced by the enclosed air at temperatures exceeding 90°C



## High Temperature Silicone Cables

[www.caledonian-cables.co.uk](http://www.caledonian-cables.co.uk)

### Product specification:

AWG	No. of Cores	Conductor cross section mm <sup>2</sup>	Nominal OD mm	Copper weight kg/km	Gross Weight kg/km
18	2	0.75	7.2	14.4	88
18	3	0.75	7.6	21.6	99
18	4	0.75	8.1	29	121
18	5	0.75	9.2	36	147
18	6	0.75	9.9	43	169
18	7	0.75	9.9	50	178
17	2	1	7.6	19	98
17	3	1	8	29	119
17	4	1	8.8	38	139
17	5	1	9.7	48	167
17	6	1	10.4	58	185
17	7	1	10.4	67	194
16	2	1.5	8.3	29	126
16	3	1.5	8.7	43	143
16	4	1.5	9.6	58	170
16	5	1.5	10.4	72	198
16	6	1.5	11.4	86	245
16	7	1.5	11.4	101	256
16	8	1.5	12.7	116	315
16	10	1.5	14	144	370
16	12	1.5	14.5	173	408
16	14	1.5	15.6	202	471
16	16	1.5	17	231	541
16	18	1.5	17.8	260	599
16	20	1.5	18.3	288	630
16	24	1.5	20.4	346	760
14	2	2.5	9.7	48	165
14	3	2.5	10.2	72	238
14	4	2.5	11.5	96	268
14	5	2.5	12.7	120	315
14	6	2.5	13.7	144	370
14	7	2.5	13.7	168	385
14	12	2.5	17.6	288	608



AWG	No. of Cores	Conductor cross section mm <sup>2</sup>	Nominal OD mm	Copper weight kg/km	Gross Weight kg/km
12	2	4	11.5	77	255
12	3	4	12.2	115	299
12	4	4	13.4	154	365
12	5	4	15.1	192	455
12	6	4	16.4	230	525
12	7	4	16.4	269	556
10	2	6	12.9	115	326
10	3	6	13.7	173	401
10	4	6	14.8	230	485
10	5	6	16.8	288	602
10	6	6	18.2	346	701
10	7	6	18.2	403	736
8	2	10	17.3	192	543
8	3	10	18.4	288	652
8	4	10	20.6	384	825
8	5	10	22.5	480	987
6	2	16	20.2	308	748
6	3	16	21.5	462	909
6	4	16	23.4	616	1183
6	5	16	26.2	770	1393
4	2	25	23.8	480	1046
4	3	25	26	720	1347
4	4	25	28.3	960	1678
2	2	35	27.2	672	1378
2	3	35	29	1008	1846
2	4	35	32.3	1344	2240
1	2	50	31.4	960	1869
1	3	50	33.5	1440	2384
1	4	50	37.2	1920	2702
2/0	2	70	35.3	1344	2482
2/0	3	70	38.3	2016	3314
2/0	4	70	42.5	2688	4074
3/0	2	90	41.4	1824	3380
3/0	3	90	44.8	2736	4299
3/0	4	90	49.8	3648	5339
4/0	3	120	48.8	3465	5277
4/0	4	120	54.1	4620	6571



### SiHF-C-Si



#### Product application:

SiHF-C-Si is a special 180 Degree C. silicone multi-core cable for use in high and low temperature areas or whenever the insulation is subject to extreme temperature changes. These cables are mainly found in steel producing industry and aviation industry as well as in ship building, cement, glass and ceramic factories. SiHF-C-Si cables are low-smoke and halogen-free especially suited for use in power stations. The silicone jacket provides added heat, chemical, oil and acidic resistance while the internal tinned copper braid shield protects against electromagnetic interference offering disturbance free signals and impulses. Not permitted for outdoor use.

#### Product characteristic:

##### Construction:

- Tinned copper conductor according to DIN VDE 0295 cl.5, BS 6360 cl.5 and IEC 60228 cl.5
- Conductor insulation of silicone
- Conductor identification according to DIN VDE 0293-308, single color, or black conductors with sequential numbering imprinted in white, for 2 conductors brown, blue
- Conductors stranded in layers with optimal lay-length
- Green-yellow grounding (3 conductors)
- Inner jacket of silicone
- Braid of tinned Cu wires, coverage approx. 85%
- Silicone-rubber-insulated common outer jacket
- Jacket preferentially red brown color

##### Technical:

- Special silicone-insulated cable with higher heat-resistance adapted to DIN VDE 0250 part 1 and part 816



- Temperature range: -60°C to +180°C
- Short time temp up to +220° C
- Temperature limit at the conductor in operation +180°C
- Nominal voltage: 300/500 V
- Test voltage: 2000 V
- Insulation resistance :min. 200 MΩ x km
- Minimum bending radius: flexing 10 x cable Ø    fixed installation 5 x cable Ø
- Coupling resistance :max. 250Ω/km
- Radiation resistance : up to 20x10<sup>6</sup> cJ/kg (up to 20 Mrad)

### Properties:

- Resistant to high molecular oils, fats from vegetables and animals, alcohols, plasticizers and clophenes, diluted acids, lye and salt dissolution, oxidation substances, tropical influences and weather, lake water, oxygen and UV
- Halogen-free according to DIN VDE 0482 part 267/ EN 50267-2-2/ IEC 60754-2 (equivalent DIN VDE 0472 part 813)
- No propagation of fire  
Testing according to DIN VDE 0482 part 265-2-1/ EN 50265-2-1/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- For laying as a fixed installation only in open or ventilated pipe systems as well as in ducts.  
Otherwise the mechanical properties of the silicon are reduced by the enclosed air at temperatures exceeding 90°C.

### Product specification:

AWG	No. of Cores	Conductor cross section mm <sup>2</sup>	Nominal OD mm	Copper weight kg/km	Gross Weight kg/km
20	2	0.25	8.7	55.5	101
20	3	0.25	8.9	60.8	118
20	4	0.25	9.4	66.5	131
20	5	0.25	10	81.6	153
20	7	0.25	10.5	92.2	173
20	10	0.25	13.1	124	242
20	12	0.25	13.4	134.4	263
20	16	0.25	14.6	170.2	326
20	18	0.25	15.1	181	351
20	25	0.25	19.4	230.1	348



## High Temperature Silicone Cables

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AWG	No. of Cores	Conductor cross section mm <sup>2</sup>	Nominal OD mm	Copper weight kg/km	Gross Weight kg/km
18	2	0.75	9.2	61.4	124
18	3	0.75	9.5	69.1	136
18	4	0.75	10.1	86.7	159
18	5	0.75	10.8	95.2	180
18	7	0.75	11.6	113.3	212
18	10	0.75	14.4	165.2	306
18	12	0.75	14.7	180.3	333
18	16	0.75	16.5	212.2	418
18	18	0.75	17.3	282.1	453
18	25	0.75	22.1	297.4	468
17	2	1	9.5	66.7	132
17	3	1	9.7	86.2	153
17	4	1	10.4	96.8	173
17	5	1	11.3	108.3	202
17	7	1	12	141.2	243
17	10	1	14.9	190	238
17	12	1	15.2	209.8	371
17	16	1	17	251.8	468
17	18	1	17.8	297.4	526
17	25	1	23	329	559
16	2	1.5	10.7	87.7	172
16	3	1.5	11.2	103.5	198
16	4	1.5	11.8	131.7	235
16	5	1.5	13.3	148.5	281
16	7	1.5	14.3	193.4	345
16	10	1.5	17.7	268.5	482
16	12	1.5	18	298.4	531
16	16	1.5	20.1	362.3	662
16	18	1.5	20.9	394	720
16	25	1.5	24.1	488.2	791
14	2	2.5	12.1	122.3	230
14	3	2.5	12.9	147.7	275
14	4	2.5	14.2	188.6	340
14	5	2.5	15.3	214.9	394
14	7	2.5	16.9	265.7	488
12	2	4	14.6	159.2	444
12	4	4	17.1	294	520
12	5	4	19.4	374	653
10	4	6	18.8	449	781
10	5	6	21.2	563	982
8	4	10	25.7	759	1294
6	4	16	28.4	1180	1988
4	4	25	35	1810	2995



## SID



### Product application:

SID cables are suitable where PVC insulated cables become brittle due to high temperature variations. Silicone insulated single cores are preferably used in the metallurgical industry, steel works, hot rolling mills, coking plants, foundries etc. Insulation consists of silicone rubber. It is resistant to vegetable and animal fat, many types of oil and diluted acids. No decomposition occurs when exposed to alcohol, alkaline solutions, etc. The insulation is resistant to oxygen and ozone. Should the cable burn, an insulation silicone dioxide layer will remain on the conductor to render it short circuit proof. Suitable for fixed installation.

### Product characteristic:

#### Construction:

- Solid tinned copper single wire
- Solid to VDE-0295 Class-1, IEC 60228 CI-1
- Silicone core insulation
- High ignition and flash point

#### Technical:

- Working voltage: 300/500 volts
- Test voltage: 2000 volts
- Bending Radius: 5 x cable Ø
- Temp range: -60° C to +180° C
- Short time temp up to +220° C
- Flame retardant: IEC 60332.1
- Insulation resistance: 20 MΩ x km



## High Temperature Silicone Cables

[www.caledonian-cables.co.uk](http://www.caledonian-cables.co.uk)

### Properties:

- Advantages  
High ignition or flash point
- Resistant to  
High molecular oils, fats from vegetables and animals, alcohols, plasticizers and clophenes, diluted acids, lye and salt dissolution, oxidation substances, tropical influences and weather, lake water, oxygen
- Halogen-free  
According to DIN VDE 0482 part 267/ EN 50267-2-1/ IEC 60754-1 (equivalent DIN VDE 0472 part 815)
- Behavior in fire  
No flame propagation  
Test according to DIN VDE 0482 part 265-2-1/ EN 50265-2-1/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- For laying as a fixed installation only in open or ventilated pipe systems as well as in ducts.  
Otherwise the mechanical properties of the silicon are reduced by the enclosed air at temperatures exceeding 90°C

### Product specification:

AWG	No. of Cores	Conductor Cross Section mm <sup>2</sup>	Nominal OD mm	Copper weight kg / km	Gross Weight kg / km
-	1	0.2	1.7	1.9	4.2
-	1	0.28	1.8	2.7	5.1
20	1	0.5	2	4.8	7.7
18	1	0.75	2.2	7.2	10.4
17	1	1	2.3	9.6	12.8
16	1	1.5	2.6	14.4	18
14	1	2.5	3.2	24	28.9
12	1	4	3.9	38	45.4
10	1	6	4.4	58	64.5



## SID/GL



### Product application:

SID/GL cables are suitable where PVC insulated cables become brittle due to high temperature variations. Silicone insulated single cores are preferably used in the metallurgical industry, steel works, hot rolling mills, coking plants, foundries etc. Insulation consists of silicone rubber. It is resistant to vegetable and animal fat, many types of oil and diluted acids. No decomposition occurs when exposed to alcohol, alkaline solutions, etc. The insulation is resistant to oxygen and ozone. Should the cable burn, an insulation silicone dioxide layer will remain on the conductor to render it short circuit proof. Suitable for fixed installation.

### Product characteristic:

#### Construction:

- Solid tinned copper single wire
- Solid to VDE-0295 Class-1, IEC 60228 CI-1
- Silicone core insulation
- High ignition and flash point
- Glass fiber braiding

#### Technical:

- Working voltage: 300/500 volts
- Test voltage: 2000 volts
- Only for fixed applications
- Temp range: -60° C to +180° C
- Short time temp up to +220° C
- Flame retardant: IEC 60332.1
- Insulation resistance: 20 MΩ x km



## High Temperature Silicone Cables

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### Properties:

- Advantages
  - High ignition or flash point
- Resistant to
  - High molecular oils, fats from vegetables and animals, alcohols, plasticizers and clophenes, diluted acids, lye and salt dissolution, oxidation substances, tropical influences and weather, lake water, oxygen
- Halogen-free
  - According to DIN VDE 0482 part 267/ EN 50267-2-1/ IEC 60754-1 (equivalent DIN VDE 0472 part 815)
- Behavior in fire
  - No flame propagation
  - Test according to DIN VDE 0482 part 265-2-1/ EN 50265-2-1/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- For laying as a fixed installation only in open or ventilated pipe systems as well as in ducts.
  - Otherwise the mechanical properties of the silicon are reduced by the enclosed air at temperatures exceeding 90°C.

### Product specification:

AWG	No. of Cores	Conductor Cross Section mm <sup>2</sup>	Nominal OD mm	Copper weight kg / km	Gross Weight kg / km
20	1	0.5	2.5	4.8	10
18	1	0.75	2.7	7.2	15
17	1	1	2.8	9.6	19
16	1	1.5	3.1	14.4	28
14	1	2.5	3.7	24	40
12	1	4	4.4	36	55
10	1	6	4.9	58	80



## FEP Insulated Thermocouple Wire and Extension Wire



### Product application:

FEP Insulated Thermocouple Wire may be used for general use extension wire for thermocouples

### Product characteristic:

#### Construction:

- Solid or stranded thermocouple wire
- Flame retardant extruded fluoropolymer FEP insulation
- Parallel conductors
- Flame retardant extruded fluoropolymer FEP jacket

#### Technical:

- Maximum temp up to +200° C, continuous 250°C
- Minimum Bend Radius: insulation 3 x cable Ø  
overall 5 x cable Ø
- Limits of Error: Conforms to ASTM E230, IEC 584, and ANSI MC 96.1
- Color Code: Conforms to ANSI, IEC, JIS



## High Temperature Thermocouple Cables

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### Properties:

- Excellent abrasion, chemical and moisture resistance
- Service temperature of 200 ° C
- Low friction factor when pulled
- Flame retardant; non-propagating in fire conditions

### Product specification:

Type K Thermocouple Wire  
Chromel/Alumel Thermocouple Wire Type K

AWG	Conductor Cross Section mm <sup>2</sup>	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
30	0.05	0.1	0.15	0.76/1.21	3
24	0.2	0.2	0.25	1.42/2.33	9
24	0.2	0.2	0.25	0.15/2.54	10
20	0.5	0.2	0.25	1.73/2.95	18
20	0.5	0.2	0.25	1.88/3.25	19
16	1.5	0.2	0.25	2.21/3.91	36

Type K Thermocouple Wire - Extension Grade  
Chromel/Alumel Extension Grade Thermocouple Wire Type K

AWG	Conductor Cross Section mm <sup>2</sup>	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
30	0.05	0.1	0.15	0.76/1.21	3
24	0.2	0.2	0.25	1.42/2.33	9
24	0.2	0.2	0.25	0.15/2.54	10
20	0.5	0.2	0.25	1.73/2.95	18
20	0.5	0.2	0.25	1.88/3.25	19
16	1.5	0.2	0.25	2.21/3.91	36



### Type J Thermocouple Wire

Iron/Constantan Thermocouple Wire Type J

AWG	Conductor Cross Section mm <sup>2</sup>	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
30	0.05	0.1	0.15	0.76/1.21	3
24	0.2	0.2	0.25	1.42/2.33	9
24	0.2	0.2	0.25	0.15/2.54	10
20	0.5	0.2	0.25	1.73/2.95	18
20	0.5	0.2	0.25	1.88/3.25	19
16	1.5	0.2	0.25	2.21/3.91	36

### Type J Thermocouple Wire - Extension Grade

Iron/Constantan Extension Grade Thermocouple Wire Type J

AWG	Conductor Cross Section mm <sup>2</sup>	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
30	0.05	0.1	0.15	0.76/1.21	3
24	0.2	0.2	0.25	1.42/2.33	9
24	0.2	0.2	0.25	0.15/2.54	10
20	0.5	0.2	0.25	1.73/2.95	18
20	0.5	0.2	0.25	1.88/3.25	19
16	1.5	0.2	0.25	2.21/3.91	36

### Type T Thermocouple Wire

Copper/Constantan Thermocouple Wire Type T

AWG	Conductor Cross Section mm <sup>2</sup>	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
30	0.05	0.1	0.15	0.76/1.21	3
24	0.2	0.2	0.25	1.42/2.33	9
24	0.2	0.2	0.25	0.15/2.54	10
20	0.5	0.2	0.25	1.73/2.95	18
20	0.5	0.2	0.25	1.88/3.25	19
16	1.5	0.2	0.25	2.21/3.91	36



## High Temperature Thermocouple Cables

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Type T Thermocouple Wire - Extension Grade

Copper/Constantan Extension Grade Thermocouple Wire Type T

AWG	Conductor Cross Section mm <sup>2</sup>	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
30	0.05	0.1	0.15	0.76/1.21	3
24	0.2	0.2	0.25	1.42/2.33	9
24	0.2	0.2	0.25	0.15/2.54	10
20	0.5	0.2	0.25	1.73/2.95	18
20	0.5	0.2	0.25	1.88/3.25	19
16	1.5	0.2	0.25	2.21/3.91	36

Type E Thermocouple Wire

Chromel/Constantan Thermocouple Wire Type E

AWG	Conductor Cross Section mm <sup>2</sup>	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
30	0.05	0.1	0.15	0.76/1.21	3
24	0.2	0.2	0.25	1.42/2.33	9
24	0.2	0.2	0.25	0.15/2.54	10
20	0.5	0.2	0.25	1.73/2.95	18
20	0.5	0.2	0.25	1.88/3.25	19
16	1.5	0.2	0.25	2.21/3.91	36

Type E Thermocouple Wire - Extension Grade

Chromel/Constantan Extension Grade Thermocouple Wire Type E

AWG	Conductor Cross Section mm <sup>2</sup>	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
30	0.05	0.1	0.15	0.76/1.21	3
24	0.2	0.2	0.25	1.42/2.33	9
24	0.2	0.2	0.25	0.15/2.54	10
20	0.5	0.2	0.25	1.73/2.95	18
20	0.5	0.2	0.25	1.88/3.25	19
16	1.5	0.2	0.25	2.21/3.91	36



Type N Thermocouple Wire

Nicrosil/Nisil Thermocouple Wire Type N

AWG	Conductor Cross Section mm <sup>2</sup>	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
30	0.05	0.1	0.15	0.76/1.21	3
24	0.2	0.2	0.25	1.42/2.33	9
24	0.2	0.2	0.25	0.15/2.54	10
20	0.5	0.2	0.25	1.73/2.95	18
20	0.5	0.2	0.25	1.88/3.25	19
16	1.5	0.2	0.25	2.21/3.91	36

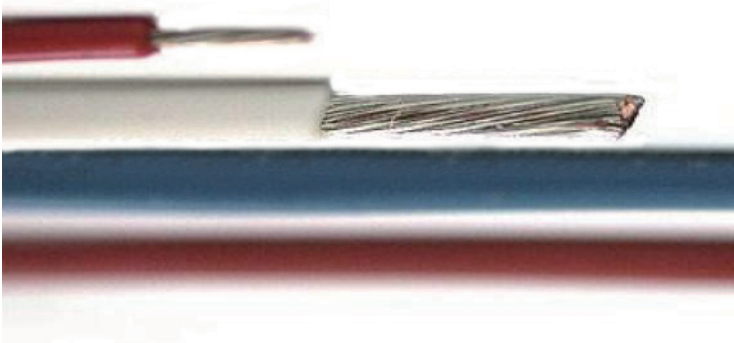
Type N Thermocouple Wire - Extension Grade

Nicrosil/Nisil Extension Grade Thermocouple Wire Type N

AWG	Conductor Cross Section mm <sup>2</sup>	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
30	0.05	0.1	0.15	0.76/1.21	3
24	0.2	0.2	0.25	1.42/2.33	9
24	0.2	0.2	0.25	0.15/2.54	10
20	0.5	0.2	0.25	1.73/2.95	18
20	0.5	0.2	0.25	1.88/3.25	19
16	1.5	0.2	0.25	2.21/3.91	36



## TFE Insulated Thermocouple Wire and Extension Wire



### Product application:

TFE Thermocouple Wire may be used for aircraft and petroleum processing

### Product characteristic:

#### Construction:

- Solid or stranded thermocouple wire
- Fused TFE tape insulation
- Parallel conductors
- Flame retardant extruded fluoropolymer TFE jacket

#### Technical:

- Continuous temperature rating: 260°C
- Minimum Bend Radius: insulation 3 x cable Ø overall 5 x cable Ø
- Limits of Error: Conforms to ASTM E230, IEC 584, and ANSI MC 96.1
- Color Code: Conforms to ANSI, IEC, JIS

#### Properties:

- Excellent abrasion, chemical and moisture resistance.
- Service temperature of 260°C



- Low friction factor when pulled
- Flame retardant; non-propagating in fire conditions

### Product specification:

TFE Insulated Type J Thermocouple Wire

Iron/Constantan TFE Thermocouple Wire 260°C

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
26	0.406	0.152	0.203	1.12*1.83	6
24	0.508	0.152	0.203	1.19*1.95	7.5
24S*(7/32)	0.61	0.152	0.203	1.24*2.13	8.9
20	0.813	0.152	0.203	1.55*2.69	16.4
20S*(7/28)	0.965	0.152	0.203	1.63*2.84	17.9
18	1.02	0.152	0.203	1.73*3.05	23.8
18S*(7/26)	1.22	0.152	0.203	1.93*3.45	26.8
16	1.29	0.254	0.203	2.21*4.01	37.3
16S*(7/24)	1.52	0.254	0.203	2.44*4.47	40.2

TFE Insulated Extension Grade Type JX Thermocouple Wire

Iron/Constantan TFE Thermocouple Wire 260°C - Extension Grade

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
26	0.406	0.152	0.203	1.12*1.83	6
24	0.508	0.152	0.203	1.19*1.95	7.5
24S*(7/32)	0.61	0.152	0.203	1.24*2.13	8.9
20	0.813	0.152	0.203	1.55*2.69	16.4
20S*(7/28)	0.965	0.152	0.203	1.63*2.84	17.9
18	1.02	0.152	0.203	1.73*3.05	23.8
18S*(7/26)	1.22	0.152	0.203	1.93*3.45	26.8
16	1.29	0.254	0.203	2.21*4.01	37.3
16S*(7/24)	1.52	0.254	0.203	2.44*4.47	40.2



## High Temperature Thermocouple Cables

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TFE Insulated Type K Thermocouple Wire  
Chromel/Alumel TFE Thermocouple Wire 260°C

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
26	0.406	0.152	0.203	1.12*1.83	6
24	0.508	0.152	0.203	1.19*1.95	7.5
24S*(7/32)	0.61	0.152	0.203	1.24*2.13	8.9
20	0.813	0.152	0.203	1.55*2.69	16.4
20S*(7/28)	0.965	0.152	0.203	1.63*2.84	17.9
18	1.02	0.152	0.203	1.73*3.05	23.8
18S*(7/26)	1.22	0.152	0.203	1.93*3.45	26.8
16	1.29	0.254	0.203	2.21*4.01	37.3
16S*(7/24)	1.52	0.254	0.203	2.44*4.47	40.2

TFE Insulated Extension Grade Type KX Thermocouple Wire  
Chromel/Alumel TFE Thermocouple Wire 260°C - Extension Grade

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
26	0.406	0.152	0.203	1.12*1.83	6
24	0.508	0.152	0.203	1.19*1.95	7.5
24S*(7/32)	0.61	0.152	0.203	1.24*2.13	8.9
20	0.813	0.152	0.203	1.55*2.69	16.4
20S*(7/28)	0.965	0.152	0.203	1.63*2.84	17.9
18	1.02	0.152	0.203	1.73*3.05	23.8
18S*(7/26)	1.22	0.152	0.203	1.93*3.45	26.8
16	1.29	0.254	0.203	2.21*4.01	37.3
16S*(7/24)	1.52	0.254	0.203	2.44*4.47	40.2



# Caledonian High Temperature Cables

## High Temperature Thermocouple Cables

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TFE Insulated Type T Thermocouple Wire  
Copper/Constantan TFE Thermocouple Wire 260°C

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
26	0.406	0.152	0.203	1.12*1.83	6
24	0.508	0.152	0.203	1.19*1.95	7.5
24S*(7/32)	0.61	0.152	0.203	1.24*2.13	8.9
20	0.813	0.152	0.203	1.55*2.69	16.4
20S*(7/28)	0.965	0.152	0.203	1.63*2.84	17.9
18	1.02	0.152	0.203	1.73*3.05	23.8
18S*(7/26)	1.22	0.152	0.203	1.93*3.45	26.8
16	1.29	0.254	0.203	2.21*4.01	37.3
16S*(7/24)	1.52	0.254	0.203	2.44*4.47	40.2

TFE Insulated Extension Grade Type TX Thermocouple Wire  
Copper/Constantan TFE Thermocouple Wire 260°C - Extension Grade

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
26	0.406	0.152	0.203	1.12*1.83	6
24	0.508	0.152	0.203	1.19*1.95	7.5
24S*(7/32)	0.61	0.152	0.203	1.24*2.13	8.9
20	0.813	0.152	0.203	1.55*2.69	16.4
20S*(7/28)	0.965	0.152	0.203	1.63*2.84	17.9
18	1.02	0.152	0.203	1.73*3.05	23.8
18S*(7/26)	1.22	0.152	0.203	1.93*3.45	26.8
16	1.29	0.254	0.203	2.21*4.01	37.3
16S*(7/24)	1.52	0.254	0.203	2.44*4.47	40.2



## High Temperature Thermocouple Cables

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TFE Insulated Type E Thermocouple Wire

Chromel/Constantan TFE Thermocouple Wire 260°C

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
26	0.406	0.152	0.203	1.12*1.83	6
24	0.508	0.152	0.203	1.19*1.95	7.5
24S*(7/32)	0.61	0.152	0.203	1.24*2.13	8.9
20	0.813	0.152	0.203	1.55*2.69	16.4
20S*(7/28)	0.965	0.152	0.203	1.63*2.84	17.9
18	1.02	0.152	0.203	1.73*3.05	23.8
18S*(7/26)	1.22	0.152	0.203	1.93*3.45	26.8
16	1.29	0.254	0.203	2.21*4.01	37.3
16S*(7/24)	1.52	0.254	0.203	2.44*4.47	40.2

TFE Insulated Extension Grade Type EX Thermocouple Wire

Chromel/Constantan TFE Thermocouple Wire 260°C - Extension Grade

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
26	0.406	0.152	0.203	1.12*1.83	6
24	0.508	0.152	0.203	1.19*1.95	7.5
24S*(7/32)	0.61	0.152	0.203	1.24*2.13	8.9
20	0.813	0.152	0.203	1.55*2.69	16.4
20S*(7/28)	0.965	0.152	0.203	1.63*2.84	17.9
18	1.02	0.152	0.203	1.73*3.05	23.8
18S*(7/26)	1.22	0.152	0.203	1.93*3.45	26.8
16	1.29	0.254	0.203	2.21*4.01	37.3
16S*(7/24)	1.52	0.254	0.203	2.44*4.47	40.2



TFE Insulated Type N Thermocouple Wire

Nicrosil/Nisil TFE Thermocouple Wire 260°C

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
26	0.406	0.152	0.203	1.12*1.83	6
24	0.508	0.152	0.203	1.19*1.95	7.5
24S*(7/32)	0.61	0.152	0.203	1.24*2.13	8.9
20	0.813	0.152	0.203	1.55*2.69	16.4
20S*(7/28)	0.965	0.152	0.203	1.63*2.84	17.9
18	1.02	0.152	0.203	1.73*3.05	23.8
18S*(7/26)	1.22	0.152	0.203	1.93*3.45	26.8
16	1.29	0.254	0.203	2.21*4.01	37.3
16S*(7/24)	1.52	0.254	0.203	2.44*4.47	40.2

TFE Insulated Extension Grade Type NX Thermocouple Wire

Nicrosil/Nisil TFE Thermocouple Wire 260°C - Extension Grade

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
26	0.406	0.152	0.203	1.12*1.83	6
24	0.508	0.152	0.203	1.19*1.95	7.5
24S*(7/32)	0.61	0.152	0.203	1.24*2.13	8.9
20	0.813	0.152	0.203	1.55*2.69	16.4
20S*(7/28)	0.965	0.152	0.203	1.63*2.84	17.9
18	1.02	0.152	0.203	1.73*3.05	23.8
18S*(7/26)	1.22	0.152	0.203	1.93*3.45	26.8
16	1.29	0.254	0.203	2.21*4.01	37.3
16S*(7/24)	1.52	0.254	0.203	2.44*4.47	40.2





## PFA Insulated Thermocouple Wire and Extension Wire



### Product application:

PFA Thermocouple Wire may be used for general use extension wire.

### Product characteristic:

#### Construction:

- Solid or stranded tinned copper thermocouple wire
- Flame retardant extruded fluoropolymer PFA insulation
- Parallel conductors
- Flame retardant extruded fluoropolymer PFA jacket

#### Technical:

- Continuous temperature rating: 260°C
- Minimum Bend Radius: insulation 3 x cable Ø overall 5 x cable Ø
- Limits of Error: Conforms to ASTM E230, IEC 584, and ANSI MC 96.1
- Color Code: Conforms to ANSI, IEC, JIS

#### Properties:

- Excellent abrasion, oil, chemical and moisture resistance.
- Service temperature of 260°C
- Low friction factor when pulled.



**Product specification:**

PFA-Insulated Type J Thermocouple Wire

Iron/Constantan PFA Thermocouple Wire 260°C

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.2	0.25	2.6 x 4.8	51
16	1.29	0.2	0.25	2.2 x 3.9	33
16S*	1.47	0.2	0.25	2.4 x 4.3	36
18	1.02	0.2	0.25	1.9 x 3.4	22
20	0.81	0.2	0.15	1.7 x 2.9	16
20S*	0.97	0.2	0.15	1.8 x 3.1	18
22	0.64	0.2	0.15	1.5 x 2.6	11
24	0.51	0.2	0.15	1.4 x 2.3	8.5
24S*	0.61	0.2	0.15	1.6 x 2.7	9.2
26	0.41	0.2	0.15	1.3 x 2.1	6.5
28	0.32	0.2	0.15	1.2 x 2.0	5.5
30	0.25	0.2	0.15	1.2 x 1.8	4.5

PFA-Insulated Type J Thermocouple Wire - Extension Grade

Iron/Constantan PFA Thermocouple Wire 260°C - Extension Grade

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.2	0.25	2.6 x 4.8	51
16	1.29	0.2	0.25	2.2 x 3.9	33
16S*	1.47	0.2	0.25	2.4 x 4.3	36
18	1.02	0.2	0.25	1.9 x 3.4	22
20	0.81	0.2	0.15	1.7 x 2.9	16
20S*	0.97	0.2	0.15	1.8 x 3.1	18
22	0.64	0.2	0.15	1.5 x 2.6	11
24	0.51	0.2	0.15	1.4 x 2.3	8.5
24S*	0.61	0.2	0.15	1.6 x 2.7	9.2
26	0.41	0.2	0.15	1.3 x 2.1	6.5
28	0.32	0.2	0.15	1.2 x 2.0	5.5
30	0.25	0.2	0.15	1.2 x 1.8	4.5



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PFA-Insulated Type K Thermocouple Wire  
Chromel/Alumel PFA Thermocouple Wire 260°C

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.2	0.25	2.6 x 4.8	51
16	1.29	0.2	0.25	2.2 x 3.9	33
16S*	1.47	0.2	0.25	2.4 x 4.3	36
18	1.02	0.2	0.25	1.9 x 3.4	22
20	0.81	0.2	0.15	1.7 x 2.9	16
20S*	0.97	0.2	0.15	1.8 x 3.1	18
22	0.64	0.2	0.15	1.5 x 2.6	11
24	0.51	0.2	0.15	1.4 x 2.3	8.5
24S*	0.61	0.2	0.15	1.6 x 2.7	9.2
26	0.41	0.2	0.15	1.3 x 2.1	6.5
28	0.32	0.2	0.15	1.2 x 2.0	5.5
30	0.25	0.2	0.15	1.2 x 1.8	4.5

PFA-Insulated Type K Thermocouple Wire - Extension Grade  
Chromel/Alumel PFA Thermocouple Wire 260°C - Extension Grade

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.2	0.25	2.6 x 4.8	51
16	1.29	0.2	0.25	2.2 x 3.9	33
16S*	1.47	0.2	0.25	2.4 x 4.3	36
18	1.02	0.2	0.25	1.9 x 3.4	22
20	0.81	0.2	0.15	1.7 x 2.9	16
20S*	0.97	0.2	0.15	1.8 x 3.1	18
22	0.64	0.2	0.15	1.5 x 2.6	11
24	0.51	0.2	0.15	1.4 x 2.3	8.5
24S*	0.61	0.2	0.15	1.6 x 2.7	9.2
26	0.41	0.2	0.15	1.3 x 2.1	6.5
28	0.32	0.2	0.15	1.2 x 2.0	5.5
30	0.25	0.2	0.15	1.2 x 1.8	4.5



PFA-Insulated Type T Thermocouple Wire

Copper/Constantan PFA Thermocouple Wire 260°C

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.2	0.25	2.6 x 4.8	51
16	1.29	0.2	0.25	2.2 x 3.9	33
16S*	1.47	0.2	0.25	2.4 x 4.3	36
18	1.02	0.2	0.25	1.9 x 3.4	22
20	0.81	0.2	0.15	1.7 x 2.9	16
20S*	0.97	0.2	0.15	1.8 x 3.1	18
22	0.64	0.2	0.15	1.5 x 2.6	11
24	0.51	0.2	0.15	1.4 x 2.3	8.5
24S*	0.61	0.2	0.15	1.6 x 2.7	9.2
26	0.41	0.2	0.15	1.3 x 2.1	6.5
28	0.32	0.2	0.15	1.2 x 2.0	5.5
30	0.25	0.2	0.15	1.2 x 1.8	4.5

PFA-Insulated Type T Thermocouple Wire - Extension Grade

Copper/Constantan PFA Thermocouple Wire 260°C - Extension Grade

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.2	0.25	2.6 x 4.8	51
16	1.29	0.2	0.25	2.2 x 3.9	33
16S*	1.47	0.2	0.25	2.4 x 4.3	36
18	1.02	0.2	0.25	1.9 x 3.4	22
20	0.81	0.2	0.15	1.7 x 2.9	16
20S*	0.97	0.2	0.15	1.8 x 3.1	18
22	0.64	0.2	0.15	1.5 x 2.6	11
24	0.51	0.2	0.15	1.4 x 2.3	8.5
24S*	0.61	0.2	0.15	1.6 x 2.7	9.2
26	0.41	0.2	0.15	1.3 x 2.1	6.5
28	0.32	0.2	0.15	1.2 x 2.0	5.5
30	0.25	0.2	0.15	1.2 x 1.8	4.5



## High Temperature Thermocouple Cables

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PFA-Insulated Type E Thermocouple Wire

Chromel/Constantan PFA Thermocouple Wire 260°C

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.2	0.25	2.6 x 4.8	51
16	1.29	0.2	0.25	2.2 x 3.9	33
16S*	1.47	0.2	0.25	2.4 x 4.3	36
18	1.02	0.2	0.25	1.9 x 3.4	22
20	0.81	0.2	0.15	1.7 x 2.9	16
20S*	0.97	0.2	0.15	1.8 x 3.1	18
22	0.64	0.2	0.15	1.5 x 2.6	11
24	0.51	0.2	0.15	1.4 x 2.3	8.5
24S*	0.61	0.2	0.15	1.6 x 2.7	9.2
26	0.41	0.2	0.15	1.3 x 2.1	6.5
28	0.32	0.2	0.15	1.2 x 2.0	5.5
30	0.25	0.2	0.15	1.2 x 1.8	4.5

PFA-Insulated Type E Thermocouple Wire - Extension Grade

Chromel/Constantan PFA Thermocouple Wire 260°C - Extension Grade

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.2	0.25	2.6 x 4.8	51
16	1.29	0.2	0.25	2.2 x 3.9	33
16S*	1.47	0.2	0.25	2.4 x 4.3	36
18	1.02	0.2	0.25	1.9 x 3.4	22
20	0.81	0.2	0.15	1.7 x 2.9	16
20S*	0.97	0.2	0.15	1.8 x 3.1	18
22	0.64	0.2	0.15	1.5 x 2.6	11
24	0.51	0.2	0.15	1.4 x 2.3	8.5
24S*	0.61	0.2	0.15	1.6 x 2.7	9.2
26	0.41	0.2	0.15	1.3 x 2.1	6.5
28	0.32	0.2	0.15	1.2 x 2.0	5.5
30	0.25	0.2	0.15	1.2 x 1.8	4.5



# Caledonian High Temperature Cables

## High Temperature Thermocouple Cables

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PFA-Insulated Type N Thermocouple Wire

Nicrosil/Nisil PFA Thermocouple Wire 260°C

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.2	0.25	2.6 x 4.8	51
16	1.29	0.2	0.25	2.2 x 3.9	33
16S*	1.47	0.2	0.25	2.4 x 4.3	36
18	1.02	0.2	0.25	1.9 x 3.4	22
20	0.81	0.2	0.15	1.7 x 2.9	16
20S*	0.97	0.2	0.15	1.8 x 3.1	18
22	0.64	0.2	0.15	1.5 x 2.6	11
24	0.51	0.2	0.15	1.4 x 2.3	8.5
24S*	0.61	0.2	0.15	1.6 x 2.7	9.2
26	0.41	0.2	0.15	1.3 x 2.1	6.5
28	0.32	0.2	0.15	1.2 x 2.0	5.5
30	0.25	0.2	0.15	1.2 x 1.8	4.5

PFA-Insulated Type N Thermocouple Wire - Extension Grade

Nicrosil/Nisil PFA Thermocouple Wire 260°C - Extension Grade

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.2	0.25	2.6 x 4.8	51
16	1.29	0.2	0.25	2.2 x 3.9	33
16S*	1.47	0.2	0.25	2.4 x 4.3	36
18	1.02	0.2	0.25	1.9 x 3.4	22
20	0.81	0.2	0.15	1.7 x 2.9	16
20S*	0.97	0.2	0.15	1.8 x 3.1	18
22	0.64	0.2	0.15	1.5 x 2.6	11
24	0.51	0.2	0.15	1.4 x 2.3	8.5
24S*	0.61	0.2	0.15	1.6 x 2.7	9.2
26	0.41	0.2	0.15	1.3 x 2.1	6.5
28	0.32	0.2	0.15	1.2 x 2.0	5.5
30	0.25	0.2	0.15	1.2 x 1.8	4.5



## Fiberglass Insulated Thermocouple Wire and Extension Wire



### Product application:

Fiberglass Thermocouple Wire is ideal for general applications requiring moderate abrasion, moisture resistance, and wide temperature capabilities

### Product characteristic:

#### Construction:

- Solid or stranded tinned copper thermocouple wire
- Braided fiberglass insulation
- Parallel conductors
- Braided fiberglass jacket

#### Technical:

- Continuous temperature rating: 400°C
- Minimum Bend Radius: insulation 3 x cable Ø overall 5 x cable Ø
- Limits of Error: Conforms to ASTM E230, IEC 584, and ANSI MC 96.1
- Color Code: Conforms to ANSI, IEC, JIS

#### Properties:

- Good thermal durability and tensile strength
- Service temperature up to 400°C



- Good dielectric and electrical characteristics
- Braided fiberglass insulation for abrasion resistance
- Braided fiberglass jacket for additional flexibility and abrasion resistance

### Product specification:

Fiberglass Type K Thermocouple Wire  
Chromel/Alumel Fiberglass Thermocouple Wire Type K

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.18	0.25	2.5 x 4.6	43
16	1.29	0.18	0.25	2.2 x 3.8	30
16S*	1.47	0.18	0.25	2.4 x 4.3	33
18	1.02	0.18	0.25	1.8 x 3.2	19
20	0.81	0.15	0.15	1.4 x 2.5	11
20S*	0.97	0.15	0.15	1.5 x 2.7	12
22	0.64	0.15	0.15	1.2 x 2.2	8
24	0.51	0.15	0.15	1.0 x 1.7	4.8
24S*	0.61	0.15	0.15	1.2 x 2.1	5.1
26	0.41	0.11	0.15	0.9 x 1.5	3.3
28	0.32	0.11	0.15	0.8 x 1.4	2.5
30	0.25	0.11	0.15	0.8 x 1.2	1.9

Fiberglass Type K Thermocouple Wire Extension Grade  
Chromel/Alumel Fiberglass Thermocouple Wire Type K

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.18	0.25	2.5 x 4.6	43
16	1.29	0.18	0.25	2.2 x 3.8	30
16S*	1.47	0.18	0.25	2.4 x 4.3	33
18	1.02	0.18	0.25	1.8 x 3.2	19
20	0.81	0.15	0.15	1.4 x 2.5	11
20S*	0.97	0.15	0.15	1.5 x 2.7	12
22	0.64	0.15	0.15	1.2 x 2.2	8
24	0.51	0.15	0.15	1.0 x 1.7	4.8
24S*	0.61	0.15	0.15	1.2 x 2.1	5.1
26	0.41	0.11	0.15	0.9 x 1.5	3.3
28	0.32	0.11	0.15	0.8 x 1.4	2.5
30	0.25	0.11	0.15	0.8 x 1.2	1.9



## High Temperature Thermocouple Cables

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Fiberglass Type J Thermocouple Wire  
Iron/Constantan Fiberglass Thermocouple Wire Type J

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.18	0.25	2.5 x 4.6	43
16	1.29	0.18	0.25	2.2 x 3.8	30
16S*	1.47	0.18	0.25	2.4 x 4.3	33
18	1.02	0.18	0.25	1.8 x 3.2	19
20	0.81	0.15	0.15	1.4 x 2.5	11
20S*	0.97	0.15	0.15	1.5 x 2.7	12
22	0.64	0.15	0.15	1.2 x 2.2	8
24	0.51	0.15	0.15	1.0 x 1.7	4.8
24S*	0.61	0.15	0.15	1.2 x 2.1	5.1
26	0.41	0.11	0.15	0.9 x 1.5	3.3
28	0.32	0.11	0.15	0.8 x 1.4	2.5
30	0.25	0.11	0.15	0.8 x 1.2	1.9

Fiberglass Type J Thermocouple Wire Extension Grade  
Iron/Constantan Fiberglass Thermocouple Wire Type J

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.18	0.25	2.5 x 4.6	43
16	1.29	0.18	0.25	2.2 x 3.8	30
16S*	1.47	0.18	0.25	2.4 x 4.3	33
18	1.02	0.18	0.25	1.8 x 3.2	19
20	0.81	0.15	0.15	1.4 x 2.5	11
20S*	0.97	0.15	0.15	1.5 x 2.7	12
22	0.64	0.15	0.15	1.2 x 2.2	8
24	0.51	0.15	0.15	1.0 x 1.7	4.8
24S*	0.61	0.15	0.15	1.2 x 2.1	5.1
26	0.41	0.11	0.15	0.9 x 1.5	3.3
28	0.32	0.11	0.15	0.8 x 1.4	2.5
30	0.25	0.11	0.15	0.8 x 1.2	1.9



# Caledonian High Temperature Cables

## High Temperature Thermocouple Cables

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Fiberglass Type T Thermocouple Wire  
Copper/Constantan Fiberglass Thermocouple Wire Type T

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.18	0.25	2.5 x 4.6	43
16	1.29	0.18	0.25	2.2 x 3.8	30
16S*	1.47	0.18	0.25	2.4 x 4.3	33
18	1.02	0.18	0.25	1.8 x 3.2	19
20	0.81	0.15	0.15	1.4 x 2.5	11
20S*	0.97	0.15	0.15	1.5 x 2.7	12
22	0.64	0.15	0.15	1.2 x 2.2	8
24	0.51	0.15	0.15	1.0 x 1.7	4.8
24S*	0.61	0.15	0.15	1.2 x 2.1	5.1
26	0.41	0.11	0.15	0.9 x 1.5	3.3
28	0.32	0.11	0.15	0.8 x 1.4	2.5
30	0.25	0.11	0.15	0.8 x 1.2	1.9

Fiberglass Type T Thermocouple Wire Extension Grade  
Copper/Constantan Fiberglass Thermocouple Wire Type T

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.18	0.25	2.5 x 4.6	43
16	1.29	0.18	0.25	2.2 x 3.8	30
16S*	1.47	0.18	0.25	2.4 x 4.3	33
18	1.02	0.18	0.25	1.8 x 3.2	19
20	0.81	0.15	0.15	1.4 x 2.5	11
20S*	0.97	0.15	0.15	1.5 x 2.7	12
22	0.64	0.15	0.15	1.2 x 2.2	8
24	0.51	0.15	0.15	1.0 x 1.7	4.8
24S*	0.61	0.15	0.15	1.2 x 2.1	5.1
26	0.41	0.11	0.15	0.9 x 1.5	3.3
28	0.32	0.11	0.15	0.8 x 1.4	2.5
30	0.25	0.11	0.15	0.8 x 1.2	1.9



## High Temperature Thermocouple Cables

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Fiberglass Type E Thermocouple Wire  
Chromel/Constantan Fiberglass Thermocouple Wire Type E

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.18	0.25	2.5 x 4.6	43
16	1.29	0.18	0.25	2.2 x 3.8	30
16S*	1.47	0.18	0.25	2.4 x 4.3	33
18	1.02	0.18	0.25	1.8 x 3.2	19
20	0.81	0.15	0.15	1.4 x 2.5	11
20S*	0.97	0.15	0.15	1.5 x 2.7	12
22	0.64	0.15	0.15	1.2 x 2.2	8
24	0.51	0.15	0.15	1.0 x 1.7	4.8
24S*	0.61	0.15	0.15	1.2 x 2.1	5.1
26	0.41	0.11	0.15	0.9 x 1.5	3.3
28	0.32	0.11	0.15	0.8 x 1.4	2.5
30	0.25	0.11	0.15	0.8 x 1.2	1.9

Fiberglass Type E Thermocouple Wire Extension Grade  
Chromel/Constantan Fiberglass Thermocouple Wire Type E

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.18	0.25	2.5 x 4.6	43
16	1.29	0.18	0.25	2.2 x 3.8	30
16S*	1.47	0.18	0.25	2.4 x 4.3	33
18	1.02	0.18	0.25	1.8 x 3.2	19
20	0.81	0.15	0.15	1.4 x 2.5	11
20S*	0.97	0.15	0.15	1.5 x 2.7	12
22	0.64	0.15	0.15	1.2 x 2.2	8
24	0.51	0.15	0.15	1.0 x 1.7	4.8
24S*	0.61	0.15	0.15	1.2 x 2.1	5.1
26	0.41	0.11	0.15	0.9 x 1.5	3.3
28	0.32	0.11	0.15	0.8 x 1.4	2.5
30	0.25	0.11	0.15	0.8 x 1.2	1.9



# Caledonian High Temperature Cables

## High Temperature Thermocouple Cables

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Fiberglass Type N Thermocouple Wire  
Nicrosil/Nisil Fiberglass Thermocouple Wire Type N

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.18	0.25	2.5 x 4.6	43
16	1.29	0.18	0.25	2.2 x 3.8	30
16S*	1.47	0.18	0.25	2.4 x 4.3	33
18	1.02	0.18	0.25	1.8 x 3.2	19
20	0.81	0.15	0.15	1.4 x 2.5	11
20S*	0.97	0.15	0.15	1.5 x 2.7	12
22	0.64	0.15	0.15	1.2 x 2.2	8
24	0.51	0.15	0.15	1.0 x 1.7	4.8
24S*	0.61	0.15	0.15	1.2 x 2.1	5.1
26	0.41	0.11	0.15	0.9 x 1.5	3.3
28	0.32	0.11	0.15	0.8 x 1.4	2.5
30	0.25	0.11	0.15	0.8 x 1.2	1.9

Fiberglass Type N Thermocouple Wire Extension Grade  
Nicrosil/Nisil Fiberglass Thermocouple Wire Type N

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
14	1.63	0.18	0.25	2.5 x 4.6	43
16	1.29	0.18	0.25	2.2 x 3.8	30
16S*	1.47	0.18	0.25	2.4 x 4.3	33
18	1.02	0.18	0.25	1.8 x 3.2	19
20	0.81	0.15	0.15	1.4 x 2.5	11
20S*	0.97	0.15	0.15	1.5 x 2.7	12
22	0.64	0.15	0.15	1.2 x 2.2	8
24	0.51	0.15	0.15	1.0 x 1.7	4.8
24S*	0.61	0.15	0.15	1.2 x 2.1	5.1
26	0.41	0.11	0.15	0.9 x 1.5	3.3
28	0.32	0.11	0.15	0.8 x 1.4	2.5
30	0.25	0.11	0.15	0.8 x 1.2	1.9



## Flexible Thermocouple Wire(1024°C)



### Product application:

These cables are designed for a range of applications which include: replacement for beaded thermocouples, thermocouple for oven surveys, heat treating or forging, casting of steel or titanium, thermocouple for coke ovens, soaking pits where more flexibility is required compared to mineral insulated products. Designed for extreme temperature applications.

### Product characteristic:

#### Construction:

- Solid or stranded thermocouple wire
- Fused TFE tape insulation
- Parallel conductors
- Flame retardant extruded fluoropolymer TFE jacket

#### Technical:

- Continuous temperature rating:260°C
- Minimum Bend Radius: insulation 3 x cable Ø overall 5 x cable Ø
- Limits of Error: Conforms to ASTM E230, IEC 584, and ANSI MC 96.1
- Color Code: Conforms to ANSI, IEC, JIS



### Properties:

- Designed for extended high temperature service of (1024°C) with intermittent use of (1432°C)
- Good flexibility.
- Replaces beaded thermocouples.
- Excellent thermocouple probe in various high temperature applications.

### Product specification:

Flexible Type K Thermocouple Wire

Chromel/Alumel Flexible Thermocouple Wire Type K

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
24	12.954	0.381	0.381	2.03/3.3	9
20	20.574	0.381	0.381	2.34/3.92	15
16	32.766	0.381	0.381	2.82/4.88	30
14	41.402	0.381	0.381	3.15/5.54	48

Flexible Type K Thermocouple Wire Extension Grade

Chromel/Alumel Flexible Thermocouple Wire Type K

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
24	12.954	0.381	0.381	2.03/3.3	9
20	20.574	0.381	0.381	2.34/3.92	15
16	32.766	0.381	0.381	2.82/4.88	30
14	41.402	0.381	0.381	3.15/5.54	48



## High Temperature Thermocouple Cables

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Flexible Type J Thermocouple Wire

Iron/Constantan Flexible Thermocouple Wire Type J

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
24	12.954	0.381	0.381	2.03/3.3	9
20	20.574	0.381	0.381	2.34/3.92	15
16	32.766	0.381	0.381	2.82/4.88	30
14	41.402	0.381	0.381	3.15/5.54	48

Flexible Type J Thermocouple Wire Extension Grade

Iron/Constantan Flexible Thermocouple Wire Type J

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
24	12.954	0.381	0.381	2.03/3.3	9
20	20.574	0.381	0.381	2.34/3.92	15
16	32.766	0.381	0.381	2.82/4.88	30
14	41.402	0.381	0.381	3.15/5.54	48

Flexible Type T Thermocouple Wire

Copper/Constantan Flexible Thermocouple Wire Type T

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
24	12.954	0.381	0.381	2.03/3.3	9
20	20.574	0.381	0.381	2.34/3.92	15
16	32.766	0.381	0.381	2.82/4.88	30
14	41.402	0.381	0.381	3.15/5.54	48



Flexible Type T Thermocouple Wire Extension Grade  
Copper/Constantan Flexible Thermocouple Wire Type T

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
24	12.954	0.381	0.381	2.03/3.3	9
20	20.574	0.381	0.381	2.34/3.92	15
16	32.766	0.381	0.381	2.82/4.88	30
14	41.402	0.381	0.381	3.15/5.54	48

Flexible Type E Thermocouple Wire  
Chromel/Constantan Flexible Thermocouple Wire Type E

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
24	12.954	0.381	0.381	2.03/3.3	9
20	20.574	0.381	0.381	2.34/3.92	15
16	32.766	0.381	0.381	2.82/4.88	30
14	41.402	0.381	0.381	3.15/5.54	48

Flexible Type E Thermocouple Wire Extension Grade  
Chromel/Constantan Flexible Thermocouple Wire Type E

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
24	12.954	0.381	0.381	2.03/3.3	9
20	20.574	0.381	0.381	2.34/3.92	15
16	32.766	0.381	0.381	2.82/4.88	30
14	41.402	0.381	0.381	3.15/5.54	48



## High Temperature Thermocouple Cables

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Flexible Type N Thermocouple Wire

Nicrosil/Nisil Flexible Thermocouple Wire Type N

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
24	12.954	0.381	0.381	2.03/3.3	9
20	20.574	0.381	0.381	2.34/3.92	15
16	32.766	0.381	0.381	2.82/4.88	30
14	41.402	0.381	0.381	3.15/5.54	48

Flexible Type N Thermocouple Wire Extension Grade

Nicrosil/Nisil Flexible Thermocouple Wire Type N

AWG	Nominal Conductor Diameter mm	Nominal Thickness mm			Gross Weight kg/km
		Insulation	Jacket	O.D.	
24	12.954	0.381	0.381	2.03/3.3	9
20	20.574	0.381	0.381	2.34/3.92	15
16	32.766	0.381	0.381	2.82/4.88	30
14	41.402	0.381	0.381	3.15/5.54	48



## **PVC Single Pair Thermocouple Wire (105°C)**



### **Product application:**

PVC Single Pair Thermocouple Wire is rated for use in cable tray conduit or direct burial applications

### **Product characteristic:**

#### **Construction:**

- Solid or stranded thermocouple alloy
- Extruded high temperature 105°C PVC insulation
- When twisted shielded pair construction (SF), 100% aluminum-polyester tape with drain.
- Extruded PVC jacket

#### **Technical:**

- Continuous temperature rating: 105°C
- Minimum Bend Radius: insulation 3 x cable Ø overall 5 x cable Ø
- Limits of Error: Conforms to ASTM E230, IEC 584, and ANSI MC 96.1
- Color Code: Conforms to ANSI, IEC, JIS

#### **Properties:**

- Good dielectric mechanical strength and flexibility
- Service temperature up 105°C
- Good resistance to water, abrasion, oil and chemicals
- Economical, general use



## High Temperature Thermocouple Cables

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- Rated for use in cable tray conduit or direct burial applications

### Product specification:

Solid Conductor, Parallel Pair

AWG	Strand	Insulation Thickness mm		O.D. mm	Gross Weight kg/km
		Primary	Jacket		
20	Solid	0.254	0.508	2.34/3.66	21
16	Solid	0.381	0.508	3.23/5.13	40
14	Solid	0.432	0.635	3.76/6.25	57
20	Solid	0.254	0.508	2.34/3.66	21
16	Solid	0.381	0.508	3.23/5.13	40
14	Solid	0.432	0.635	3.76/6.25	57

Stranded Conductor, Parallel Pair

AWG	Strand	Insulation Thickness mm		O.D. mm	Gross Weight kg/km
		Primary	Jacket		
20	7/28	0.305	0.508	2.62/4.23	21
16	7/24	0.381	0.508	3.23/5.51	43
20	7/28	0.305	0.508	2.62/4.23	21
16	7/24	0.381	0.508	3.23/5.51	43

Solid Conductor, Shielded Pair

AWG	Strand	Insulation Thickness mm		O.D. mm	Gross Weight kg/km
		Primary	Jacket		
20	Solid	0.254	0.508	3.912	21
16	Solid	0.381	0.584	5.385	40
20	Solid	0.254	0.508	3.912	21
16	Solid	0.381	0.584	5.385	40



Stranded Conductor, Shielded Pair

AWG	Strand	Insulation Thickness mm		O.D. mm	Gross Weight kg/km
		Primary	Jacket		
20	7/28	0.305	0.508	4.47	24
16	7/24	0.406	0.584	5.69	43
20	7/28	0.305	0.508	4.47	24
16	7/24	0.406	0.584	5.69	43

Stranded with Filler

AWG	Strand	Insulation Thickness mm		O.D. mm	Gross Weight kg/km
		Primary	Jacket		
20	7/28	0.305	0.508	4.572	24
16	7/24	0.406	0.584	5.842	43
20	7/28	0.305	0.508	4.572	24
16	7/24	0.406	0.584	5.842	43



## PVC Multi Pair Thermocouple Wire (105°C)



### Product application:

PVC Multi Pair Thermocouple Wire may be used in the transmission of telephone or other signals.

### Product characteristic:

#### Construction:

- 20 gauge solid thermocouple alloy.
- Extruded high temperature 105°C PVC insulation.
- Color coded twisted pairs, numbered sequentially for easy identification.
- Matched pairs are twisted to reduce the amount of electromagnetic interference.
- Flame retardant PVC jacket with ripcord.
- On individually shielded pairs the shields are isolated from each other.

#### Technical:

- Continuous temperature rating: 105°C
- Minimum Bend Radius: insulation 3 x cable Ø overall 5 x cable Ø
- Limits of Error: Conforms to ASTM E230, IEC 584, and ANSI MC 96.1
- Color Code: Conforms to ANSI, IEC, JIS



### Properties:

- Allows a multiple of sensors to be connected to associated instrumentation
- Good resistance to weather, moisture, oils, alkalies, and mechanical abrasion
- PVC offers high dielectric
- Maximum noise rejection with overall shield
- Transmission of telephone or other signal with communications wire in core
- Non-propagating, flame retardant

### Product specification:

Multi Pair Extension Cable With Overall Shield

AWG	Strand	Number of Pairs	Thickness of Jacket mm	O.D. mm	Gross Weight kg/km
20	Solid	4	1.016	9.042	100
20	Solid	6	1.27	10.82	144
20	Solid	8	1.27	11.76	179
20	Solid	12	1.27	13.665	243
20	Solid	16	1.27	15.748	324
20	Solid	20	1.524	16.358	385
20	Solid	24	1.524	18.44	455
20	Solid	36	1.524	20.777	631
20	Solid	50	1.778	24.282	867
20	Solid	8	1.27	11.76	179
20	Solid	6	1.27	10.82	144
20	Solid	50	1.778	24.282	867
20	Solid	4	1.016	9.042	100
20	Solid	36	1.524	20.777	631
20	Solid	24	1.524	18.44	455
20	Solid	20	1.524	16.358	385
20	Solid	16	1.27	15.748	324
20	Solid	12	1.27	13.665	243



## High Temperature Thermocouple Cables

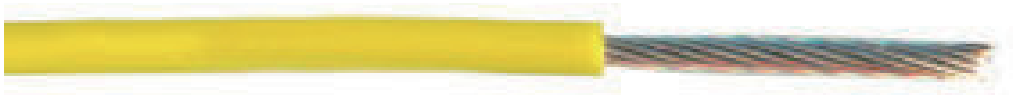
[www.caledonian-cables.co.uk](http://www.caledonian-cables.co.uk)

Multi Pair Extension Cable With Individually Shielded Pairs

AWG	Strand	Number of Pairs	Thickness of Jacket mm	O.D. mm	Gross Weight kg/km
20	Solid	4	1.27	10.668	135
20	Solid	6	1.27	12.573	186
20	Solid	8	1.27	13.589	231
20	Solid	12	1.524	16.51	339
20	Solid	16	1.524	18.161	430
20	Solid	20	1.524	19.558	513
20	Solid	24	1.524	21.717	598
20	Solid	36	1.778	24.638	863
20	Solid	50	1.778	28.829	1158
20	Solid	8	1.27	13.589	231
20	Solid	6	1.27	12.573	186
20	Solid	50	1.778	28.829	1158
20	Solid	4	1.27	10.668	135
20	Solid	36	1.778	24.638	863
20	Solid	24	1.524	21.717	598
20	Solid	20	1.524	19.558	513
20	Solid	16	1.524	18.161	430
20	Solid	12	1.524	16.51	339



## High Temperature PTFE Cable



### Product application:

Equipment wire for high performance aerospace applications. PTFE wires are used in severe environmental conditions.

### Product characteristic:

#### Construction:

- Stranded silver or nickel plated copper conductor
- Polytetrafluoroethylene insulation
- Sheath colour: Black, Blue, Brown, Red, White, Grey, Violet, Pink, Orange, Yellow, Green/Yellow to BS 3G 210

#### Technical:

- Temperature Rating: -75°C to +190°C
- Minimum Bending Radius: 6 x overall diameter
- Voltage Working: Type A 300V Test 2500V  
Type B 600V Test 3400V  
Type C 1000V Test 5000V
- Colour code confirms to BS 3G 210

#### Properties:

- Good resistance to oils, fuels and fluids
- Heat resistance
- Voltage ratings are conforming to American MIL, VDE, DIN, BS, or Lloyd's standards



## High Temperature PTFE Cables

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### Product specification:

AWG	Strand x Diameter mm	Conductor Cross Section mm <sup>2</sup>	Voltage Grade	O/D mm min - max	Gross Weight kg/km
30	7/0.10	0.056	A	0.50-0.65	1.1
28	7/0.12	0.089	A	0.56-0.71	1.4
28	7/0.12	0.089	B	0.76-0.96	2.1
26	7/0.15	0.14	A	0.65-0.80	1.1
26	7/0.15	0.14	B	0.85-1.05	3.09
24	7/0.20	0.22	A	0.80-0.95	3.04
24	7/0.20	0.22	B	1.00-1.20	3.89
24	7/0.20	0.22	C	1.26-1.52	4.64
22	19/0.15	0.35	A	0.95-1.10	4.41
22	19/0.15	0.35	B	1.15-1.35	5.44
22	19/0.15	0.35	C	1.41-1.67	6.43
20	19/0.20	0.61	A	1.20-1.35	7.19
20	19/0.20	0.61	B	1.40-1.60	8.43
20	19/0.20	0.61	C	1.66-1.92	9.08
18	19/0.25	0.96	B	1.65-1.85	12.1
18	19/0.25	0.96	C	1.91-2.17	14.3
16	19/0.30	1.23	C	2.16-2.46	16.5
14	19/0.36	1.94	C	2.34-2.74	23.9
12	19/0.45	3.08	C	2.91-3.31	38.5
10	37/0.40	4.65	C	3.46-3.86	56.0



## **P-Temp-500**



### **Product application:**

This high performance cable is designed to operate under more arduous high temperature conditions, providing moisture resistance, toughness, flexibility and a continuous conductor operating temperature of 450°C.

### **Product characteristic:**

#### **Construction:**

- Fine nickel plated copper wire strands
- Glass fiber woven mica tape
- Varnished color glass fiber woven mica tape for insulation
- Mica tape, impregnated and varnished glass fibre braid for outer sheath
- Standard colour is white, other colours to special order

#### **Technical:**

- Working voltage :300/500V
- Temperature range: Continuous 500°C
- Core concentricity:  $\geq 70\%$

#### **Properties:**

- Good flexibility installation
- Service temperature upto 500°C
- Good resistance to high temperature, oil and chemical
- Good resistance to abrasion or mechanical damage



## High Temperature P-Temp-500 Cable

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### Product specification:

AWG	Strand x Diameter mm	Conductor Cross Section mm <sup>2</sup>	Nominal Insulation Thickness mm	Nominal Diameter over Single Core mm
20	7 × 0.3	0.5	0.5	2.3 ± 0.3
18	11 × 0.3	0.75	0.5	2.5 ± 0.3
17	14 × 0.3	1	0.5	2.6 ± 0.3
16	21 × 0.3	1.5	0.5	2.9 ± 0.3
14	35 × 0.3	2.5	0.6	3.6 ± 0.5
12	56 × 0.3	4	0.8	4.7 ± 0.5
10	84 × 0.3	6	0.8	5.5 ± 0.5
8	84 × 0.4	10	0.8	6.6 ± 0.5
6	228 × 0.3	16	0.8	7.8 ± 0.5
6	126 × 0.4	16	0.8	7.8 ± 0.5
4	196 × 0.4	25	0.8	9.5 ± 0.5
4	361 × 0.3	25	0.8	9.5 ± 0.5
2	494 × 0.3	35	1	11.2 ± 1.0
1	396 × 0.4	50	1.2	13.2 ± 1.0
1	703 × 0.3	50	1.2	13.2 ± 1.0
2/0	551 × 0.4	70	1.2	15.4 ± 1.0
2/0	988 × 0.3	70	1.2	15.4 ± 1.0
3/0	760 × 0.4	95	1.2	17.4 ± 1.0

\*other specifications are available upon request



## PVC Flatform Cable



### Product application:

Suitable in dry, wet and moist rooms and are used in conveyor and hoisting equipment etc, and as feed cable for mobile machine components.

### Product characteristic:

#### Construction :

- Bare copper conductor
- Structure according to VDE 0295, class 5
- PVC insulation
- Core marking :
  - up to 5 cores colour coded in accordance to VDE 0293;
  - 7 cores and more black with printed consecutive number coding
- Earth conductor green / yellow
- PVC outer sheath / black
- Flame retardant

#### Technical:

- Bending radius  $10 \times \varnothing$
- Temperature range flexing : - 15°C to + 70°C
  - Static : - 30°C to + 70°C



## High Temperature Special Cables

[www.caledonian-cables.co.uk](http://www.caledonian-cables.co.uk)

### Product specification:

AWG	No. of Cores	Conductor cross section mm <sup>2</sup>	Outer Diameter mm	Gross Copper Weight kg / km	Gross Weight kg / km
17	12	1	35 x 1.3	115	392
17	16	1	46 x 4.3	154	521
17	20	1	57 x 4.3	192	642
17	24	1	68 x 4.3	230	772
16	4	1.5	14.5 x 5.2	58	130
16	5	1.5	17.5 x 5.2	72	160
16	7	1.5	25.3 x 5.2	101	230
16	8	1.5	25.3 x 5.2	115	260
16	10	1.5	27.3 x 5.2	144	320
16	12	1.5	40.8 x 5.2	173	385
16	18	1.5	61.8 x 5.2	259	665
16	24	1.5	83 x 5.2	346	820
14	4	2.5	17.5 x 5.9	96	190
14	5	2.5	21.1 x 5.9	120	235
14	7	2.5	31.1 x 5.9	168	340
14	8	2.5	33.1 x 5.9	192	370
14	10	2.5	42.6 x 5.9	240	515
14	12	2.5	49.1 x 5.9	288	560
14	24	2.5	102 x 5.9	480	1220
12	4	4	20 x 6.9	154	270
12	5	4	26 x 6.9	192	280
12	7	4	35.3 x 6.9	269	480
8	4	10	27.6 x 9.3	384	580
8	5	10	37.5 x 11	480	1120
6	4	16	43.5 x 11.2	768	1180
4	4	25	41.2 x 13	960	1340
2	4	35	49.6 x 14.5	1340	1800
1	4	50	58.4 x 17.5	1920	2520
2/0	4	70	63 x 20	2688	3670



## Neoprene Platform Cable



### Product application:

Neoprene sheathed flat cables are weatherproof and thus suitable for use under adverse ambient conditions, e.g. for outdoor installation in shipyards, on cranes and on hoisting gear and conveyor systems, for example. Used up to mean mechanical strain and severe bending load along a single level during operation.

### Product characteristic:

#### Construction

- Bare copper conductors
- Structure according to VDE 0295, class 5 or 6
- Rubber insulated cores
- Core marking :
  - up to 5 cores colour coded in accordance to VDE 0293;
  - 7 cores and more black with printed consecutive number coding
- Earth conductor green / yellow
- Neoprene outer sheath / black
- Flame retardant

#### Technical:

- Bending radius  $10 \times \varnothing$
- Temperature range flexing : - 25°C to + 70°C
  - Static : - 40°C to + 80°C



## High Temperature Special Cables

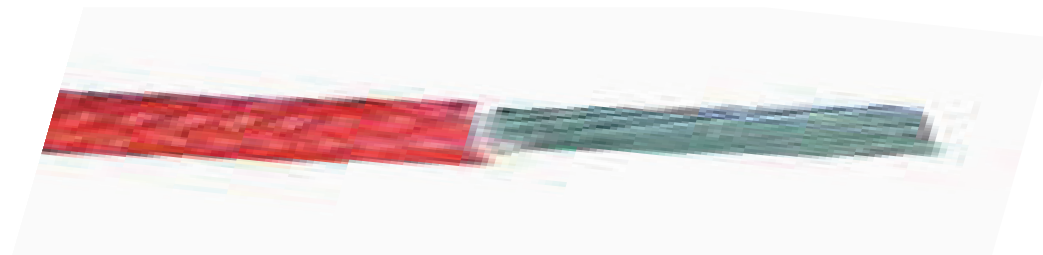
[www.caledonian-cables.co.uk](http://www.caledonian-cables.co.uk)

### Product specification:

AWG	No. of Cores	Conductor Cross Section mm <sup>2</sup>	Outer Diameter mm	Gross Copper Weight kg / km	Gross Weight kg / km
16	4	1.5	163. x 5.5	58	167
16	5	1.5	21 x 5.5	72	216
16	7	1.5	27.1 x 5.5	101	287
16	8	1.5	30.2 x 5.5	115	323
16	10	1.5	38.5 x 6.1	144	447
16	12	1.5	44.7 x 6.1	173	524
14	4	2.5	19.7 x 6.8	96	256
14	5	2.5	25 x 6.8	120	328
14	7	2.5	32.6 x 6.8	168	439
14	8	2.5	36.4 x 6.8	192	495
14	10	2.5	47 x 7.7	240	565
14	12	2.5	54.6 x 7.4	288	799
14	24	2.5	71 x 14.5	576	1614
12	4	4	24.6 x 8.7	154	395
12	5	4	31.2 x 8.7	192	529
12	7	4	40.8 x 8.4	269	681
10	4	6	27.2 x 9	230	501
10	5	6	34.6 x 9	288	652
10	7	6	45.4 x 9	403	866
8	4	10	32.8 x 10.5	384	750
8	5	10	44 x 11.8	480	1000
6	4	16	38.1 x 12.2	614	1083
6	5	16	50 x 13.6	768	1450
4	4	25	44.5 x 13.8	960	1522
4	5	25	60 x 16.3	1200	2200
4	7	25	77.7 x 15	1680	2845
2	4	35	51 x 15.8	1344	2065
2	7	35	87.5 x 16.4	2352	3770
1	4	50	59.9 x 18.4	1920	2896
2/0	4	70	68 x 20.8	2688	3887
3/0	4	95	77.3 x 23.5	3648	5117
4/0	4	120	89.5 x 28.2	4608	6809



## Silicon resin high-temperature wire



### Product application:

These cable are applied to high temperature situation such as electrons , family machines, lighting lamps, inner of burning machinery, and so on

### Product characteristic:

#### Construction

- Tin-plated, nickel-plated and silver-plated copper wire conductor
- Silicon resin isolation

#### Technical:

- Nominal voltage : 600V
- Temperature range : -600°C ~+2000°C

#### Properties:

- Outstanding insulation property, high-and-low-temperature resistance, corona and electric arc resistance, water-proof.
- Outstanding resistance to weather-aging, ozone and chemicals.
- With silicone resin, the H-grade motor, other electric appliances would be size-small, weight-light, last-long and could be used under harsh environment.
- When over loaded, the motor or other electric appliance would not go out of order and would not burn heavily. The gasses giving off are not poisonous. The remains after burning is silicon dioxide.



### Product specification:

AWG	Conductor		Isolation			Max conductor resistance in 20°C Ω/km	Gross Weight kg/km
	Nominal cross section mm <sup>2</sup>	Conductor construction No./mm	Nominal thickness mm	Nominal O.D. mm	Max O.D. mm		
26	0.128	7/0.16	0.78	2.1	2.3	143	4.6
24	0.205	7/0.20	0.78	2.2	2.4	92	5.7
22	0.324	7/0.26	0.78	2.4	2.6	56.8	8.3
20	0.519	7/0.32	0.78	2.5	2.7	40.1	10.4
18	0.823	7/0.40	0.78	2.8	3	23	14.6
16	1.31	7/0.50	0.78	3.1	3.3	14.6	20
14	2.08	41/0.254	0.78	3.6	3.8	9.9	27
12	3.31	19/0.50	0.78	4.1	4.3	5.4	36
24	0.2	1/0.50	0.78	2.2	2.4	95	5.9
24	0.2	12/0.15	0.78	2.2	2.4	95	5.9
22	0.3	1/0.62	0.78	2.3	2.5	71.2	7.2
22	0.3	17/0.15	0.78	2.3	2.5	71.2	7.2
20	0.5	1/0.80	0.78	2.5	2.7	40.1	10.1
20	0.5	28/0.15	0.78	2.5	2.7	40.1	10.1
18	0.75	1/1.0	0.78	2.8	3	26.7	13.2





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