



High-temperature wire

SiFCuSi

Copper-Braid Screened Silicone Cable

300/500 V silicone-insulated, tinned-copper-braid screened and silicone-sheathed cable



DIN VDE 0250-1

300/500 V

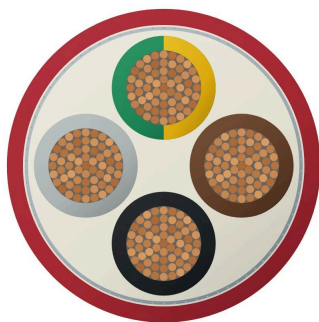
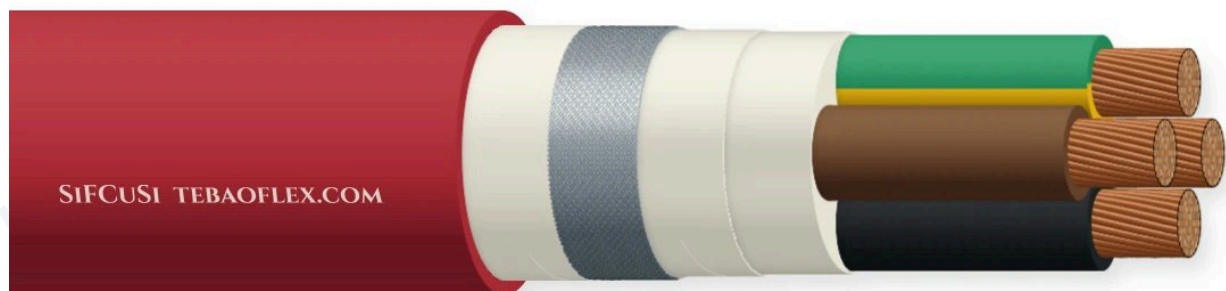
Si-Cu-Si Screened

Application

SiFCuSi (SiF-Cu-Si) high-temperature screened cable combining a Class 5 tinned copper core, inner EI2 silicone insulation, concentric tinned copper braid screen, and protective outer silicone rubber sheath for -60 °C to +180 °C.

Typical uses: Furnace Pyrometry & Sensors, High-Temp Switchgear & Drives, Glassworks & Metallurgy, Industrial Ovens & Autoclaves, Railway & Marine Hot Zones

Construction



Cross-section, not to scale

- 1 Class 5 tinned copper conductor
- 2 Inner silicone dielectric (Si)
- 3 Concentric tinned copper braid (Cu)
- 4 Outer silicone rubber jacket (Si)

Technical data

Typical values

Rated voltage U0/U	300/500 V AC	AC test voltage (core/screen)	2000 V AC (50 Hz, 5 min)
AC test voltage (screen/water)	1000 V AC on outer silicone sheath	Insulation resistance	≥ 200 MΩ·km at +20 °C
Screen optical coverage	≥ 85 % tinned copper braid	Operating temperature range	-60 °C to +180 °C continuous
Short-term peak temperature	+200 °C to +220 °C	Short-circuit conductor temp.	+250 °C
Cryogenic flexibility limit	Remains flexible down to -60 °C	Conductor stranding	IEC 60228 Class 5 fine-stranded tinned Cu
Min. bending radius (fixed)	5 × overall cable diameter	Min. bending radius (flexing)	12 × overall cable diameter
Flame retardance	IEC 60332-1-2 self-extinguishing	Halogen-free & acid gas	IEC 60754-1 & IEC 60754-2
Smoke density	IEC 61034-2 low smoke emission	Weather, UV & ozone	Immune to ozone cracking and UV ageing
Standards	DIN VDE 0250-1 / EN 50525-2-83 ref.		

Sizes

14 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Cross-section / size	Conductor build	Wall ≈ mm	Outer Ø ≈ mm	Metal kg/km	Weight ≈ kg/km	Min. bend R fixed mm
Standard SiFCuSi configurations 14 sizes							
☐ SiFCuSi 1×0.5	1×0.5	Class 5 Sn-Cu (0.5 mm ²)	1.50	5.00	23.8	51.3	25
☐ SiFCuSi 1×0.75	1×0.75	Class 5 Sn-Cu (0.75 mm ²)	1.50	5.30	27.3	58.2	26
☐ SiFCuSi 1×1	1×1	Class 5 Sn-Cu (1 mm ²)	1.50	5.40	30.1	62.2	27
☐ SiFCuSi 1×1.5	1×1.5	Class 5 Sn-Cu (1.5 mm ²)	1.50	5.70	36.1	71.8	28
☐ SiFCuSi 1×2.5	1×2.5	Class 5 Sn-Cu (2.5 mm ²)	1.50	6.60	49.1	97.0	33
☐ SiFCuSi 1×4	1×4	Class 5 Sn-Cu (4 mm ²)	1.90	8.00	68.8	139.2	40
☐ SiFCuSi 1×6	1×6	Class 5 Sn-Cu (6 mm ²)	1.90	8.60	90.3	171.7	43
☐ SiFCuSi 1×10	1×10	Class 5 Sn-Cu (10 mm ²)	1.90	9.90	133.6	241.4	50
☐ SiFCuSi 1×16	1×16	Class 5 Sn-Cu (16 mm ²)	1.90	11.00	195.4	328.5	55
☐ SiFCuSi 1×25	1×25	Class 5 Sn-Cu (25 mm ²)	1.90	12.40	287.1	456.2	62
☐ SiFCuSi 2×0.75	2×0.75	Class 5 Sn-Cu (0.75 mm ²)	1.50	7.60	43.3	106.8	46
☐ SiFCuSi 3G1.5	3G1.5	Class 5 Sn-Cu (1.5 mm ²)	1.50	9.00	77.4	166.5	54
☐ SiFCuSi 4G1.5	4G1.5	Class 5 Sn-Cu (1.5 mm ²)	1.50	9.80	94.8	200.4	59
☐ SiFCuSi 4G2.5	4G2.5	Class 5 Sn-Cu (2.5 mm ²)	1.50	11.90	141.2	297.0	71

– Outer diameters and weights are nominal engineering values for SiFCuSi subject to standard manufacturing tolerances per DIN VDE 0250-1 / EN 50525-2-83.

Electrical & rating data

14 sizes

Configuration	Max. DC R @ 20 °C Ω/km	Primary rating (A or kV)	Derated / AC rating	Dielectric test V AC rms
1×0.5 mm ²	40.10	9.0	7.0	2,000
1×0.75 mm ²	26.70	12.0	9.0	2,000
1×1 mm ²	20.00	15.0	12.0	2,000
1×1.5 mm ²	13.70	18.0	14.0	2,000
1×2.5 mm ²	8.21	26.0	20.0	2,000
1×4 mm ²	5.09	34.0	27.0	2,000

Configuration	Max. DC R @ 20 °C Ω/km	Primary rating (A or kV)	Derated / AC rating	Dielectric test V AC rms
1×6 mm ²	3.39	44.0	34.0	2,000
1×10 mm ²	1.95	61.0	48.0	2,000
1×16 mm ²	1.24	82.0	64.0	2,000
1×25 mm ²	0.80	108.0	84.0	2,000
2×0.75 mm ²	26.70	12.0	9.0	2,000
3G1.5 mm ²	13.70	18.0	14.0	2,000
4G1.5 mm ²	13.70	18.0	14.0	2,000
4G2.5 mm ²	8.21	26.0	20.0	2,000

– Electrical resistance at +20 °C and dielectric withstand voltages verified per DIN VDE 0250-1 / EN 50525-2-83.

Standards and approvals

- ✓ DIN VDE 0250-1 / EN 50525-2-83
- ✓ CE (2014/35/EU) & RoHS 3 (2015/863/EU) Compliant
- ✓ REACH SVHC & Halogen/Asbestos Compliance Verified

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/sifcusi-copper-braid-screened-silicone-cable



Typical values for this cable type, based on DIN VDE 0250-1 / EN 50525-2-83. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.