Control & signal cable

Silicone ESD Cleanroom Control Cable

Silicone ESD-Protected Cleanroom Control Cable

300/500 V -40 to +180 °C antistatic ESD-dissipative silicone ISO Class 1 cleanroom cable



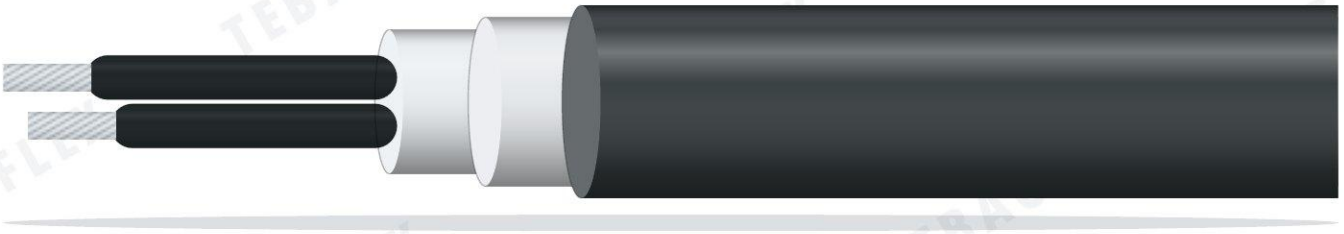
DIN EN 61340-5-1 ESD | ISO 14644-1 Cleanroom | -40 °C to +180 °C Silicone

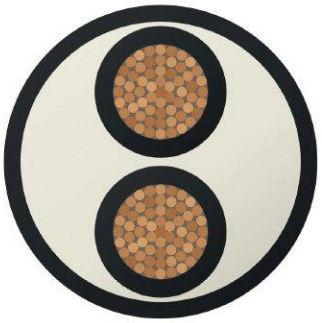
Application

Silicone ESD Cleanroom Control Cable (300/500 V, -40 to +180 °C) for Electrostatic Protected Areas (DIN EN 61340-5-1) and ISO 14644-1 Class 1 cleanrooms, featuring Class 5/6 tinned copper cores, EI2 silicone insulation, and a 10^4–10^7 Ω ESD-dissipative

Typical uses: Semiconductor Wafer Fab & Lithography (EPA), OLED / MicroLED & Flat-Panel Cleanrooms, High-Temperature Wafer Bake & Thermal Chucks, Pharmaceutical Autoclave & Aseptic Lines, Precision Metrology & Electron Microscopy

Construction





Cross-section, not to scale

1. Tinned copper conductors
2. Silicone EI2 silicone insulation
3. Antistatic ESD silicone outer jacket

Technical data

Typical values

ESD surface resistance	10^4 to 10^7 Ω (dissipative per EN 61340-5-1)	**Rated voltage U0/U**	300/500 V AC (up to 0.5 mm²: 300/300 V)
AC dielectric test voltage	2,000 V AC (core-to-core)	**Core insulation resistance**	≥ 200 MΩ·km at +20 °C
Operating temperature (fixed)	-40 °C to +180 °C (short-term +200 °C)	**Flexing temperature range**	-25 °C to +180 °C
Cleanroom classification	ISO 14644-1 Air Cleanliness Class 1	**Min. bending radius (flexing)**	10 × overall cable diameter
Min. bending radius (fixed)	4 × overall cable diameter	**Talc-free construction**	100 % chalk- and talc-free for cleanrooms
Halogen-free & low smoke	IEC 60754-1/2 & IEC 61034-1/2 pass	**Flame retardance**	IEC 60332-1-2 self-extinguishing
Cleanroom wipe resistance	Resists IPA (isopropanol), H_2O_2 & steam	**Standards**	DIN EN 61340-5-1 (EPA compliant)

Sizes

19 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 Silicone ESD Cleanroom Control Cable configurations 19 sizes							
☐ Silicone ESD 2×0.25	2×0.25 mm²	Class 5/6 Sn-Cu (0.25 mm²)	0.90	4.90	4.8	30.7	49
☐ Silicone ESD 4×0.25	4×0.25 mm²	Class 5/6 Sn-Cu (0.25 mm²)	0.90	5.60	9.6	43.5	56
☐ Silicone ESD 8×0.25	8×0.25 mm²	Class 5/6 Sn-Cu (0.25 mm²)	0.90	7.00	19.2	72.1	70
☐ Silicone ESD 2×0.5	2×0.5 mm²	Class 5/6 Sn-Cu (0.5 mm²)	0.90	5.50	9.6	42.3	55
☐ Silicone ESD 4×0.5	4×0.5 mm²	Class 5/6 Sn-Cu (0.5 mm²)	0.90	6.30	19.2	62.1	63
☐ Silicone ESD 7G0.5	7G0.5 mm²	Class 5/6 Sn-Cu (0.5 mm²)	0.90	7.30	33.6	91.2	73
☐ Silicone ESD 12G0.5	12G0.5 mm²	Class 5/6 Sn-Cu (0.5 mm²)	1.10	9.90	57.6	163.5	99
☐ Silicone ESD 3G0.75	3G0.75 mm²	Class 5/6 Sn-Cu (0.75 mm²)	0.90	6.20	21.6	63.1	62
☐ Silicone ESD 4G0.75	4G0.75 mm²	Class 5/6 Sn-Cu (0.75 mm²)	0.90	6.80	28.8	78.7	68
☐ Silicone ESD 7G0.75	7G0.75 mm²	Class 5/6 Sn-Cu (0.75 mm²)	0.90	8.00	50.4	119.5	80
☐ Silicone ESD 12G0.75	12G0.75 mm²	Class 5/6 Sn-Cu (0.75 mm²)	1.10	10.70	86.4	210.0	107
☐ Silicone ESD 3G1	3G1 mm²	Class 5/6 Sn-Cu (1 mm²)	0.90	6.60	28.8	75.8	66
☐ Silicone ESD 4G1	4G1 mm²	Class 5/6 Sn-Cu (1 mm²)	0.90	7.20	38.4	94.4	72
☐ Silicone ESD 7G1	7G1 mm²	Class 5/6 Sn-Cu (1 mm²)	0.90	8.50	67.2	145.2	85
☐ Silicone ESD 12G1	12G1 mm²	Class 5/6 Sn-Cu (1 mm²)	1.10	11.50	115.2	258.0	115
☐ Silicone ESD 3G1.5	3G1.5 mm²	Class 5/6 Sn-Cu (1.5 mm²)	0.90	7.70	43.2	107.2	77
☐ Silicone ESD 4G1.5	4G1.5 mm²	Class 5/6 Sn-Cu (1.5 mm²)	0.90	8.40	57.6	133.8	84
☐ Silicone ESD 7G1.5	7G1.5 mm²	Class 5/6 Sn-Cu (1.5 mm²)	0.90	10.00	100.8	208.8	100
☐ Silicone ESD 12G1.5	12G1.5 mm²	Class 5/6 Sn-Cu (1.5 mm²)	1.10	13.60	172.8	372.6	136

– Outer diameters and weights are nominal engineering values for Silicone ESD Cleanroom Control Cable subject to standard manufacturing tolerances per DIN EN 61340-5-1 ESD / ISO 14644-1 Class 1 Cleanroom / EN 50525-2-83 Silicone.

Electrical & rating data

19 sizes

Configuration	Max. DC R @ 20 °C Ω/km	Primary rating (A or nF/km)	Secondary rating	Dielectric test VAC rms
2×0.25 mm²	79.00	4.0	3.0	2,000
4×0.25 mm²	79.00	4.0	3.0	2,000
8×0.25 mm²	79.00	4.0	3.0	2,000
2×0.5 mm²	39.00	9.0	7.0	2,000
4×0.5 mm²	39.00	9.0	7.0	2,000
7G0.5 mm²	39.00	9.0	7.0	2,000
12G0.5 mm²	39.00	9.0	7.0	2,000
3G0.75 mm²	26.00	12.0	9.0	2,000
4G0.75 mm²	26.00	12.0	9.0	2,000
7G0.75 mm²	26.00	12.0	9.0	2,000
12G0.75 mm²	26.00	12.0	9.0	2,000
3G1 mm²	19.50	15.0	11.0	2,000
4G1 mm²	19.50	15.0	11.0	2,000
7G1 mm²	19.50	15.0	11.0	2,000
12G1 mm²	19.50	15.0	11.0	2,000
3G1.5 mm²	13.30	18.0	14.0	2,000
4G1.5 mm²	13.30	18.0	14.0	2,000
7G1.5 mm²	13.30	18.0	14.0	2,000
12G1.5 mm²	13.30	18.0	14.0	2,000

– Electrical resistance at +20 °C and dielectric withstand voltages verified per DIN EN 61340-5-1 ESD / ISO 14644-1 Class 1 Cleanroom / EN 50525-2-83 Silicone.

Standards and approvals

- DIN EN 61340-5-1 ESD / ISO 14644-1 Class 1 Cleanroom / EN 50525-2-83 Silicone
- CE (2014/35/EU) & RoHS 3 (2015/863/EU) Compliant
- REACH SVHC 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/besilen-silicone-esd-protected-cleanroom-control-cable

Typical values for this cable type, based on DIN EN 61340-5-1 ESD / ISO 14644-1 Class 1 Cleanroom / EN 50525-2-83 Silicone. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.