



High-temperature wire

Silicone High-Voltage Ignition Cable

10 kV to 40 kV DC / pulse corona-resistant silicone ignition cable for -60 °C to +180 °C



ISO 3808 / EN 50143

10 to 40 kV DC

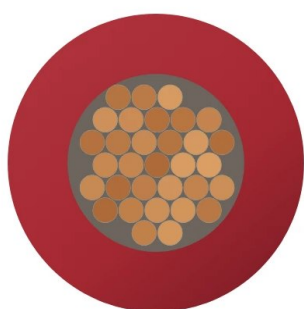
-60 to +180 °C

Application

Heavy-wall homogeneous silicone high-voltage ignition cable engineered with Class 5 tinned or nickel-plated copper conductors and void-free VMQ dielectric for industrial gas burners, boilers, turbines, and electrostatic equipment up to 40 kV DC.

Typical uses: Industrial Gas & Oil Burners, Steam Boilers & Heat Recovery, Gas Turbines & Combustors, Electrostatic Precipitators, Commercial Ovens & Kilns

Construction



Cross-section, not to scale

- 1 HV ignition conductor
- 2 Void-free conductor interface
- 3 Heavy-wall HV silicone dielectric
- 4 Anti-tracking outer silicone skin

Technical data

Typical values

Nominal pulse / DC voltage	10 kV, 15 kV, 25 kV, 30 kV, 40 kV DC	Continuous AC rms rating	5 kV to 15 kV AC rms (50/60 Hz)
Dielectric breakdown voltage	≥ 35 kV (5 mm) to ≥ 65 kV DC (10 mm)	Dielectric strength	≥ 25 kV/mm per IEC 60243-1
Conductor DC resistance	19.5 Ω/km (1.0 mm ²) · 13.3 Ω/km (1.5 mm ²)	Continuous operating temp.	-60 °C to +180 °C
Short-term peak temperature	+220 °C (up to +250 °C with Ni-Cu core)	Thermal shock test	-50 °C to +200 °C without cracking
Conductor stranding	IEC 60228 Class 5 (19 to 48 strands)	Calibrated outer diameters	5.0 mm · 7.0 mm · 8.0 mm · 10.0 mm (±0.2 mm)
Min. bending radius (fixed)	6 × overall cable diameter	Corona & ozone resistance	No cracking under ISO 3808 ozone test
Flame retardance	IEC 60332-1-2 self-extinguishing	Halogen-free verification	IEC 60754-1/2 halogen-free silicone
Standards	ISO 3808 Class E/F & EN 50143 ref.		

Sizes

9 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 High-Voltage Ignition Cable configurations 9 sizes							
☐ HV-Si 1×1.0 / Ø 5.0	1.0 mm ² (18 AWG)	32×0.20 mm Sn-Cu	1.80	5.00	9.6	31.0	30
☐ HV-Si 1×1.5 / Ø 5.2	1.5 mm ² (16 AWG)	30×0.25 mm Sn-Cu	1.80	5.20	14.4	36.0	31
☐ HV-Si 1×1.0 / Ø 7.0	1.0 mm ² (18 AWG)	32×0.20 mm Sn-Cu	2.80	7.00	9.6	54.0	42
☐ HV-Si 1×1.5 / Ø 7.0	1.5 mm ² (16 AWG)	30×0.25 mm Sn-Cu	2.70	7.00	14.4	58.0	42
☐ HV-Si 1×2.5 / Ø 7.2	2.5 mm ² (14 AWG)	50×0.25 mm Sn-Cu	2.50	7.20	24.0	68.0	43
☐ HV-Si 1×1.5 / Ø 8.0	1.5 mm ² (16 AWG)	30×0.25 mm Ni-Cu	3.20	8.00	14.4	74.0	48
☐ HV-Si 1×2.5 / Ø 8.2	2.5 mm ² (14 AWG)	50×0.25 mm Ni-Cu	3.00	8.20	24.0	84.0	49
☐ HV-Si 1×1.5 / Ø 10.0	1.5 mm ² (16 AWG)	30×0.25 mm Ni-Cu	4.20	10.00	14.4	112.0	60
☐ HV-Si 1×2.5 / Ø 10.2	2.5 mm ² (14 AWG)	50×0.25 mm Ni-Cu	4.00	10.20	24.0	122.0	61

- Outer diameters and weights are nominal engineering values for Silicone High-Voltage Ignition Cable subject to standard manufacturing tolerances per ISO 3808 / SAE J2031 / EN 50143.

Electrical & rating data

9 sizes

Configuration	Max. DC R @ 20 °C Ω/km	Primary rating (A or kV)	Derated / AC rating	Dielectric test V AC rms
HV-Si 1×1.0 / Ø 5.0 (1.0 mm ² (18 AWG))	19.50	15.0	7.0	25,000
HV-Si 1×1.5 / Ø 5.2 (1.5 mm ² (16 AWG))	13.30	15.0	7.0	25,000
HV-Si 1×1.0 / Ø 7.0 (1.0 mm ² (18 AWG))	19.50	25.0	11.0	35,000
HV-Si 1×1.5 / Ø 7.0 (1.5 mm ² (16 AWG))	13.30	25.0	11.0	35,000
HV-Si 1×2.5 / Ø 7.2 (2.5 mm ² (14 AWG))	7.98	25.0	11.0	35,000
HV-Si 1×1.5 / Ø 8.0 (1.5 mm ² (16 AWG))	13.70	30.0	14.0	45,000
HV-Si 1×2.5 / Ø 8.2 (2.5 mm ² (14 AWG))	8.21	30.0	14.0	45,000
HV-Si 1×1.5 / Ø 10.0 (1.5 mm ² (16 AWG))	13.70	40.0	18.0	60,000
HV-Si 1×2.5 / Ø 10.2 (2.5 mm ² (14 AWG))	8.21	40.0	18.0	60,000

- Electrical resistance at +20 °C and dielectric withstand voltages verified per ISO 3808 / SAE J2031 / EN 50143.

Standards and approvals

- ✓ ISO 3808 / SAE J2031 / EN 50143
- ✓ 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/silicone-high-voltage-ignition-cable



Typical values for this cable type, based on ISO 3808 / SAE J2031 / EN 50143. Values for your order are confirmed in the quotation. Subject to change without notice.
Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.