High-temperature wire

CN8 Ceramic-Fibre Nickel Wire

CN8 Ceramic-Fibre Ultra-High-Temperature Nickel Conductor Wire



+800 to +1000 °C continuous (+1200 °C peak) ceramic-fibre pure Nickel 200 wire

+800/+1000 °C Continuous | **Pure Nickel 200 Core** | **Ceramic + Mica Insulation**

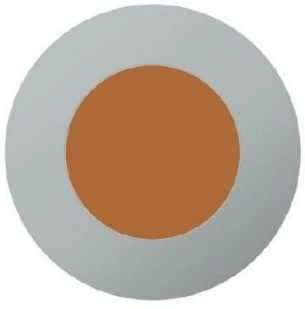
Application

CN8 Ceramic-Fibre Nickel Wire ultra-high-temperature furnace wire engineered with a flexible Class 5 pure Nickel 200 conductor (Ni ≥ 99.2 %), phlogopite mica barrier tapes, and alumino-silicate ceramic yarn braiding for +800 to +1000 °C continuous (+1200 °C

Typical uses: Heat-Treatment & Vacuum Furnaces, Ceramic & Glass Melting Kilns, Metallurgical & Foundry Equipment, Industrial Cartridge & Band Heaters, Semiconductor Diffusion Furnaces

Construction





Cross-section, not to scale

1. Flexible pure Nickel 200 conductor
2. Alumino-silicate ceramic fibre wall

Technical data

Typical values

Rated voltage (Uo/U)	300/500 V AC (dry high-temperature atmosphere)	**Dielectric test voltage**	1,500 V AC rms (50 Hz, dry)
Ni 200 resistivity at +20 °C	0.096 Ω·mm²/m (approx. 5.5 × copper)	**Insulation resistance (+20 °C)**	≥ 200 MΩ·km dry
Continuous operating temp.	-60 °C to +800 °C (+1000 °C ceramic grade)	**Short-term peak temperature**	+1200 °C excursion (Ni melting point +1453 °C)
Thermal shock endurance	Direct quench from +800 °C to +20 °C air	**Conductor stranding**	IEC 60228 Class 5 flexible pure Nickel 200
Cross-section range	0.5 mm² to 25 mm² single-core	**Min. bending radius (fixed)**	10 × overall wire diameter
Combustibility	100 % inorganic non-combustible (IEC 60332-1)	**Halogen & smoke emission**	Zero halogen, zero smoke (inorganic mineral)
Moisture sensitivity	For dry high-temperature zones; seal cold ends	**Standards**	ASTM B160 / DIN 17740 (Ni 200 / 2.4066)

Sizes

10 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 CN8 Ceramic-Fibre Nickel Wire configurations 10 sizes							
☐ CN8 Ceramic-Fibre Nickel Wire 1×0.5 (20 AWG)	0.5 mm² (20 AWG)	16×0.20 mm Ni 200	1.10	3.10	4.8	16.0	31
☐ CN8 Ceramic-Fibre Nickel Wire 1×0.75 (18 AWG)	0.75 mm² (18 AWG)	24×0.20 mm Ni 200	1.10	3.40	7.2	20.0	34
☐ CN8 Ceramic-Fibre Nickel Wire 1×1 (17 AWG)	1 mm² (17 AWG)	32×0.20 mm Ni 200	1.10	3.60	9.6	24.0	36
☐ CN8 Ceramic-Fibre Nickel Wire 1×1.5 (16 AWG)	1.5 mm² (16 AWG)	30×0.25 mm Ni 200	1.20	4.10	14.4	31.0	41
☐ CN8 Ceramic-Fibre Nickel Wire 1×2.5 (14 AWG)	2.5 mm² (14 AWG)	50×0.25 mm Ni 200	1.20	4.60	24.0	44.0	46
☐ CN8 Ceramic-Fibre Nickel Wire 1×4 (12 AWG)	4 mm² (12 AWG)	56×0.30 mm Ni 200	1.30	5.40	38.4	65.0	54
☐ CN8 Ceramic-Fibre Nickel Wire 1×6 (10 AWG)	6 mm² (10 AWG)	84×0.30 mm Ni 200	1.30	6.10	57.6	91.0	61
☐ CN8 Ceramic-Fibre Nickel Wire 1×10 (8 AWG)	10 mm² (8 AWG)	80×0.40 mm Ni 200	1.40	7.40	96.0	145.0	74
☐ CN8 Ceramic-Fibre Nickel Wire 1×16 (6 AWG)	16 mm² (6 AWG)	126×0.40 mm Ni 200	1.50	8.80	153.6	218.0	88
☐ CN8 Ceramic-Fibre Nickel Wire 1×25 (4 AWG)	25 mm² (4 AWG)	196×0.40 mm Ni 200	1.60	10.50	240.0	326.0	105

– Outer diameters and weights are nominal engineering values for CN8 Ceramic-Fibre Nickel Wire subject to standard manufacturing tolerances per ASTM B160 Pure Nickel 200 & IEC 60228 Class 5 Ultra-High-Temp Ceramic Wire.

Electrical & rating data

10 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 mm² (20 AWG)	210.00	4.0	2.0	1,500
1×0.75 mm² (18 AWG)	140.00	6.0	2.0	1,500
1×1 mm² (17 AWG)	105.00	8.0	2.0	1,500
1×1.5 mm² (16 AWG)	70.00	10.0	4.0	1,500
1×2.5 mm² (14 AWG)	42.00	14.0	5.0	1,500
1×4 mm² (12 AWG)	26.50	19.0	7.0	1,500
1×6 mm² (10 AWG)	17.50	25.0	10.0	1,500
1×10 mm² (8 AWG)	10.50	35.0	14.0	1,500
1×16 mm² (6 AWG)	6.60	48.0	18.0	1,500
1×25 mm² (4 AWG)	4.20	65.0	25.0	1,500

– Electrical resistance at +20 °C and dielectric withstand voltages verified per ASTM B160 Pure Nickel 200 & IEC 60228 Class 5 Ultra-High-Temp Ceramic Wire.

Standards and approvals

- ASTM B160 Pure Nickel 200 & IEC 60228 Class 5 Ultra-High-Temp Ceramic Wire
- 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.

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Email
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tebaoflex.com/cables/cerafil-cn8-ceramic-fibre-ultra-high-temperature-nickel-conductor-wire

Typical values for this cable type, based on ASTM B160 Pure Nickel 200 & IEC 60228 Class 5 Ultra-High-Temp Ceramic Wire. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.