



High-temperature wires & cables

Type MG / UL 5107 Mica-Glass

Mica Glass High-Temperature Wire (Type MG & UL AWM Style 5107)

600 Vac 450 °C 27% nickel-clad copper, mica-tape & fiberglass-braided lead wire



Type MG & UL 5107

600 Vac · 450 °C

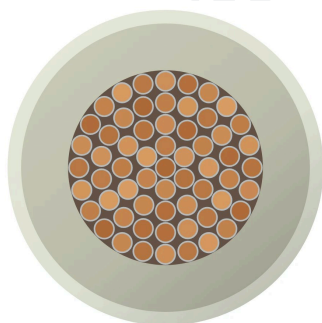
27% NiCu + Mica + Glass

Application

Extreme-temperature 600 Vac single-core furnace and heater lead wire to Type MG and UL 758 Style 5107, pairing a 27% nickel-clad copper conductor with lapped phlogopite mica tapes and a treated fiberglass outer braid for +450 °C continuous duty.

Typical uses: Industrial furnaces, kilns & heat-treat ovens, Extruder barrel band & cartridge heaters, Glass-melting & metallurgical equipment, Commercial pizza, bakery & catering ovens, Burner ignition & flame-rod assemblies, Foundry & refractory sensor lead-outs

Construction



Cross-section, not to scale

1	27% nickel-clad copper conductor	ASTM B355 / UL 758
2	Composite mica-tape dielectric	UL 758 Style 5107
3	Treated E-glass fiberglass braid	UL 758 Style 5107

Technical data

Typical values

Rated voltage	600 Vac continuous rating (UL 758 Style 5107 & Type MG)	Dielectric & spark test	2.0 kV RMS AC dielectric withstand test + 6.0 kV Vac in-line spark test per UL 758
Conductor metallurgy	Stranded 27% nickel-clad or nickel-plated annealed copper per ASTM B355 Class 27 (or pure nickel option for extreme thermal cycling)	Operating temperature range	-60 °C to +450 °C continuous operating temperature (short-term mica dielectric excursion up to +550 °C)
Inorganic non-melting barrier	Phlogopite mica and E-glass fibers do not melt or drip under radiant heat or direct flame contact	Insulation & braid system	Helically lapped phlogopite/muscovite composite mica tapes covered by a closely woven silicone- or PTFE-treated E-glass fiberglass braid
Minimum bending radius	6 × OD fixed; 10 × OD flexing	Flammability & fire behaviour	UL VW-1 / Horizontal & Vertical flame resistant; inorganic mica + glass dielectric does not melt, drip or propagate flame
Moisture & environment note	Designed for dry high-temperature zones; protect terminations from liquid moisture or condensation	Standards	UL 758 AWM Style 5107; North American Type MG; CSA C22.2 No. 210; ASTM B355 Class 27

Sizes

12 standard constructions

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

Style · AWG size	Size AWG	CSA ≈ mm ²	Stranding (count/AWG)	Conductor metallurgy	Cond. Ø mm	Mica+Braid mm	Nominal OD mm	Mass ≈ kg/km	Max. DC res. (20 °C) Ω/km
☐ Type MG / UL 5107 · 24 AWG	24 AWG	0.24	7/32	27% NiCu	0.61	0.84	2.30	7.8	118.0
☐ Type MG / UL 5107 · 22 AWG	22 AWG	0.38	7/30	27% NiCu	0.76	0.85	2.46	9.8	74.5
☐ Type MG / UL 5107 · 20 AWG	20 AWG	0.62	10/30	27% NiCu	0.97	0.85	2.67	12.6	46.8
☐ Type MG / UL 5107 · 18 AWG	18 AWG	0.96	16/30	27% NiCu	1.22	0.88	2.98	16.9	29.4
☐ Type MG / UL 5107 · 16 AWG	16 AWG	1.31	26/30	27% NiCu	1.50	0.90	3.30	22.8	18.2
☐ Type MG / UL 5107 · 14 AWG	14 AWG	2.08	41/30	27% NiCu	1.88	0.92	3.72	31.8	11.5
☐ Type MG / UL 5107 · 12 AWG	12 AWG	3.31	65/30	27% NiCu	2.36	0.95	4.27	45.6	7.2
☐ Type MG / UL 5107 · 10 AWG	10 AWG	5.26	105/30	27% NiCu	2.95	1.00	4.95	68.5	4.5
☐ Type MG / UL 5107 · 8 AWG	8 AWG	8.37	133/29	27% NiCu	3.73	1.15	6.05	106.0	2.8
☐ Type MG / UL 5107 · 6 AWG	6 AWG	13.3	133/27	27% NiCu	4.70	1.25	7.20	162.0	1.8
☐ Type MG / UL 5107 · 4 AWG	4 AWG	21.2	133/25	27% NiCu	5.90	1.35	8.60	248.0	1.1
☐ Type MG / UL 5107 · 2 AWG	2 AWG	33.6	259/26	27% NiCu	7.42	1.50	10.42	382.0	0.7

– UL AWM Style 5107 extends from 26 AWG up to 550 kcmil; pure nickel (Nickel 200) conductors are available on request for temperatures above 450 °C.

Standards and approvals

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/mica-glass-high-temperature-wire



Typical values for this cable type, based on UL 758 Style 5107 & Type MG. Values for your order are confirmed in the quotation. Subject to change without notice.
Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.