



High-temperature wires & cables

PTFE Hook-Up Wire (NEMA HP 3 / UL)

PTFE High-Temperature Hook-Up Wire (NEMA HP 3 & UL 5251)

250–1,000 V 200–260 °C PTFE & TFE/glass-braided high-temperature hook-up wire



NEMA HP 3 & UL 5251

250–1,000 V · 200–260 °C

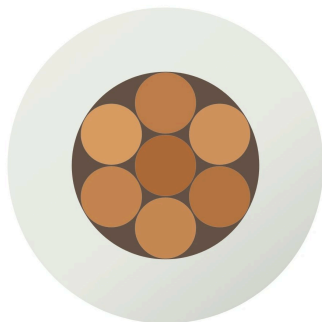
PTFE / TFE + Glass Braid

Application

PTFE high-temperature hook-up and appliance lead wire to ANSI/NEMA HP 3-2021 (MIL-W-16878 Types ET 250 V, E 600 V, EE 1,000 V for 200–260 °C) and UL AWM Style 5251 (600 Vac 250 °C TFE tape + glass/aramid + fiberglass braid, 24–4/0 AWG).

Typical uses: Military & aerospace electronics (MIL-W-16878), High-frequency RF & test instrumentation, Commercial cooking & industrial heating (UL 5251), Cryogenic (–90 °C) & vacuum chamber wiring, Chemical & petrochemical process transmitters, High-density hand-soldered backplanes

Construction



Cross-section, not to scale

1 Silver- or nickel-plated copper

ANSI/NEMA HP 3 & UL 758

2 PTFE / skived TFE insulation

NEMA HP 3 / UL 5251

3 Glass/aramid + fiberglass braid (UL 5251)

UL 758 Style 5251

Technical data

Typical values

Rated voltage by style	250 V RMS (NEMA HP 3 Type ET) · 600 V RMS (NEMA HP 3 Type E & UL 5251) · 1,000 V RMS (NEMA HP 3 Type EE)	Dielectric test & permittivity	1.5 kV RMS (Type ET), 2.0 kV RMS (Type E & UL 5251), 3.0 kV RMS (Type EE) dielectric test · 3.0–6.0 kV spark test · dielectric constant 2.0–2.1
Conductor & plating options	Stranded silver-plated copper (200 °C) or nickel-plated copper (260 °C) per ANSI/NEMA HP 3; nickel-plated or silver-plated copper per UL 5251 (250 °C)	Operating temperature range	–90 °C to +200 °C (silver-plated NEMA HP 3) · –90 °C to +260 °C (nickel-plated NEMA HP 3) · +250 °C (UL AWM Style 5251)
High-temperature solder-iron immunity	Cross-crystalline PTFE melting point (~327 °C) prevents insulation melt-back or shrinkback during hand or wave soldering	Insulation & braid construction	Type ET: 0.006 in (0.15 mm) thin wall · Type E: 0.010 in (0.25 mm) medium wall · Type EE: 0.015 in (0.38 mm) thick wall · UL 5251: skived virgin TFE tape + glass/aramid barrier + overall fiberglass braid
Minimum bending radius	6 × OD fixed; 10 × OD flexing	Solder-iron, flame & chemical resistance	UL VW-1 / NEMA HP 3 non-flammable (LOI > 95%); immune to soldering-iron melt-back, acids, alkalis, solvents, fuels and hydraulic fluids
Moisture & outgassing behaviour	Water absorption < 0.01%; chemically inert to all industrial solvents, fuels, acids and bases	Standards	ANSI/NEMA HP 3-2021 (Types ET, E, EE; ex MIL-W-16878/4, /5, /6); UL 758 AWM Style 5251 (and Styles 1180 / 1213)

Sizes

17 standard constructions

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

Style · AWG size	Rated voltage	Temp. rating	Stranding (count/AWG)	CSA ≈ mm ²	Cond. Ø mm	Wall mm	Nominal OD mm	Mass ≈ kg/km	Max. DC res. (20 °C) Ω/km
ANSI/NEMA HP 3-2021 (MIL-W-16878) · Types ET (250 V), E (600 V) & EE (1,000 V) Pure PTFE 13 sizes									
☐ NEMA HP 3 Type ET · 28 AWG	250 V	200/260 °C	7/36	0.089	0.38	0.15	0.69	1.3	209.0
☐ NEMA HP 3 Type ET · 24 AWG	250 V	200/260 °C	19/36	0.241	0.61	0.15	0.91	2.9	79.7
☐ NEMA HP 3 Type ET · 20 AWG	250 V	200/260 °C	19/32	0.616	0.97	0.15	1.27	6.5	30.8
☐ NEMA HP 3 Type E · 26 AWG	600 V	200/260 °C	19/38	0.155	0.48	0.25	0.99	2.6	126.0
☐ NEMA HP 3 Type E · 24 AWG	600 V	200/260 °C	19/36	0.241	0.61	0.25	1.12	3.7	79.7
☐ NEMA HP 3 Type E · 22 AWG	600 V	200/260 °C	19/34	0.382	0.76	0.25	1.27	5.2	49.5
☐ NEMA HP 3 Type E · 20 AWG	600 V	200/260 °C	19/32	0.616	0.97	0.25	1.47	7.5	30.8
☐ NEMA HP 3 Type E · 18 AWG	600 V	200/260 °C	19/30	0.963	1.22	0.25	1.75	11.1	19.0
☐ NEMA HP 3 Type E · 16 AWG	600 V	200/260 °C	19/29	1.23	1.37	0.33	2.03	14.8	14.9
☐ NEMA HP 3 Type E · 12 AWG	600 V	200/260 °C	19/25	3.08	2.18	0.33	2.90	33.4	5.9
☐ NEMA HP 3 Type EE · 20 AWG	1,000 V	200/260 °C	19/32	0.616	0.97	0.38	1.73	9.2	30.8
☐ NEMA HP 3 Type EE · 16 AWG	1,000 V	200/260 °C	19/29	1.23	1.37	0.38	2.21	16.4	14.9
☐ NEMA HP 3 Type EE · 10 AWG	1,000 V	200/260 °C	37/26	4.74	2.90	0.48	3.96	54.5	3.9
UL 758 AWM Style 5251 · 600 Vac · 250 °C · Skived TFE Tape + Glass/Aramid + Fiberglass Braid 4 sizes									
☐ UL AWM 5251 · 18 AWG	600 Vac	250 °C	19/30	0.963	1.22	0.76	2.74	18.5	21.6
☐ UL AWM 5251 · 14 AWG	600 Vac	250 °C	19/27	1.94	1.70	0.89	3.48	32.0	10.7
☐ UL AWM 5251 · 10 AWG	600 Vac	250 °C	37/26	4.74	2.90	1.02	4.93	68.0	4.4
☐ UL AWM 5251 · 4 AWG	600 Vac	250 °C	133/25	21.6	6.50	1.52	9.55	265.0	1.0

– NEMA HP 3 DC resistance values shown are for silver-plated copper (200 °C); nickel-plated copper (260 °C) is available across all sizes.

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

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Email

info@tebaoflex.com

Web

tebaoflex.com/cables/ptfe-high-temperature-hook-up-wire



Typical values for this cable type, based on ANSI/NEMA HP 3 & UL 758. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.