



High-temperature wires & cables

UL 11905 PFA High-Temp Wire

PFA High-Temperature Wire (UL AWM Style 11905)

600 Vac 300 °C melt-extruded perfluoroalkoxy (PFA) single-core lead wire



UL AWM Style 11905

600 Vac · 300 °C

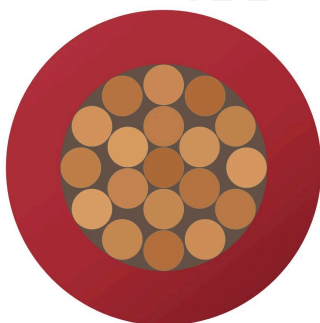
Extruded PFA (30-8 AWG)

Application

600 Vac high-temperature single-conductor hook-up and appliance lead wire to UL 758 AWM Style 11905 (30 to 8 AWG), combining nickel-plated or copper conductors with pinhole-free melt-extruded perfluoroalkoxy (PFA) fluoropolymer insulation rated up to +300 °C.

Typical uses: Semiconductor wafer & wet-bench tools, Industrial ovens, kilns & band heaters, Chemical processing & corrosive vapour zones, Aerospace & downhole high-temp sensors, Medical & pharmaceutical autoclaves, High-intensity UV & halogen curing lamps

Construction



Cross-section, not to scale

1	Annealed copper conductor core	UL 758 Style 11905
2	Nickel oxidation barrier plating	ASTM B355 / UL 758
3	Extruded PFA insulation	UL 758 Style 11905

Technical data

Typical values

Rated voltage	600 Vac (UL 758 AWM Style 11905)	Dielectric test & permittivity	2.0 kV AC dielectric test + 6.0 kV spark test · dielectric constant ~2.1 across -90 °C to +260/300 °C
Conductor & plating options	Solid or stranded nickel-plated copper (for full 300 °C UL 11905 duty) or silver-plated/bare copper per part schedule (30 to 8 AWG)	Operating temperature rating	-90 °C to +300 °C UL AWM Style 11905 rating (with 2% or 27% nickel-plated copper conductor; +260 °C continuous polymer service)
Melt-extrudable fluoropolymer stability	Perfluoroalkoxy (PFA) melting point ~305–310 °C enables continuous +260 to +300 °C rating in long splice-free spools	Extruded PFA wall thickness	0.020 in (0.51 mm) nominal extruded PFA radial wall (30 to 10 AWG) · 0.030 in (0.76 mm) on 8 AWG
Minimum bending radius	6 × OD fixed; 10 × OD flexing	Flame & chemical resistance	UL VW-1 vertical flame retardant; complete chemical inertness to strong acids, bases, halogens, solvents, oils and steam
High-purity & ultra-low outgassing	Ultra-low extractables, zero plasticisers and < 0.03% moisture absorption for semiconductor & cleanroom duty	Standards	UL 758 AWM Style 11905

Sizes

12 standard constructions

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

UL Style · AWG	Size AWG	CSA ≈ mm ²	Stranding (count/AWG)	Conductor plating	Cond. Ø mm	PFA wall mm	Nominal OD mm	Mass ≈ kg/km	Max. DC res. (20 °C) Ω/km
☐ UL 11905 · 30 AWG	30 AWG	0.057	7/38	NiCu (300 °C)	0.30	0.51	1.32	3.1	358.0
☐ UL 11905 · 28 AWG	28 AWG	0.089	7/36	NiCu (300 °C)	0.38	0.51	1.40	3.7	226.0
☐ UL 11905 · 26 AWG	26 AWG	0.155	19/38	NiCu (300 °C)	0.48	0.51	1.50	4.6	137.0
☐ UL 11905 · 24 AWG	24 AWG	0.241	19/36	NiCu (300 °C)	0.61	0.51	1.63	5.8	87.5
☐ UL 11905 · 22 AWG	22 AWG	0.382	19/34	NiCu (300 °C)	0.76	0.51	1.78	7.6	54.8
☐ UL 11905 · 20 AWG	20 AWG	0.616	19/32	NiCu (300 °C)	0.97	0.51	1.98	10.4	34.1
☐ UL 11905 · 18 AWG	18 AWG	0.963	19/30	NiCu (300 °C)	1.22	0.51	2.24	14.2	21.6
☐ UL 11905 · 16 AWG	16 AWG	1.23	19/29	NiCu (300 °C)	1.37	0.51	2.39	17.3	16.9
☐ UL 11905 · 14 AWG	14 AWG	1.94	19/27	NiCu (300 °C)	1.70	0.51	2.72	24.5	10.7
☐ UL 11905 · 12 AWG	12 AWG	3.08	19/25	NiCu (300 °C)	2.18	0.51	3.20	36.2	6.8
☐ UL 11905 · 10 AWG	10 AWG	4.74	37/26	NiCu (300 °C)	2.90	0.51	3.91	54.0	4.4
☐ UL 11905 · 8 AWG	8 AWG	8.61	133/29	NiCu (300 °C)	4.24	0.76	5.77	102.0	2.4

– Nickel-plated copper (2% or 27% nickel coating) prevents copper oxidation at 260–300 °C; solid conductor variants are also covered under UL 11905.

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.

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Email

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Typical values for this cable type, based on UL 758 Style 11905. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.