30 kVDC silicone-bondable FEP potting wire

HFPS-3020-19

30 kVDC Silicone-Bondable FEP Potting Wire

UL / MIL-DTL-16878 · 30 kVDC · −65…+200 °C bondable high-voltage fluoropolymer wire



30 kVDC Rating | **Silicone-Bondable** | **−65…+200 °C FEP**

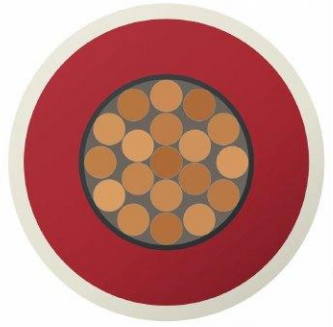
Application

HFPS-3020-19 30 kVDC high-voltage lead and potting wire combining a 20 AWG (19/32) silver-plated copper conductor, high-dielectric-strength extruded FEP primary insulation and a silicone-bondable outer surface treatment for void-free encapsulation.

Typical uses: High-Voltage Power Supplies & Pulse Modulators, Medical X-Ray, CT & Electron-Beam Equipment, Aerospace, Defense & Downhole Instrumentation, Analytical Mass Spectrometry & Ion Implantation

Construction





Cross-section, not to scale

1	Stranded Conductor (AWG 20)	MIL-DTL-16878 / IEC 60684
2	Primary HV Dielectric (FEP)	MIL-DTL-16878 / IEC 60684
3	Silicone-Bondable Outer Coating	MIL-DTL-16878 / IEC 60684

Technical data

Typical values

Rated voltage / transmission duty	30 kVDC (MIL-DTL-16878 / IEC 60684)	**Core / conductor construction**	Stranded Conductor (AWG 20) — 19/32 AWG (0.62 mm², Ø 0.97 mm) concentric stranded silver-plated copper conductor for low-resistance HV terminations
Primary dielectric / insulation	Primary HV Dielectric (FEP) — High-dielectric-strength extruded fluorinated ethylene propylene (FEP) primary insulation rated for 30 kVDC service (-65 °C to +200 °C)	**Continuous operating temperature**	−65…+200 °C (rated operating envelope)
Storage & transport temperature	−40…+80 °C on export drum or reel	**Outer protection / sheath**	Silicone-Bondable Outer Coating — Specially formulated outer silicone bonding layer (OD 2.25 mm) enabling void-free chemical adhesion to RTV/two-part silicone potting compounds
Minimum bending radius	6 × OD	**Structural layer count**	3 concentric functional layers
Environmental & chemical resistance	Industrial moisture, oils and mechanical wear per MIL-DTL-16878 / IEC 60684	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	MIL-DTL-16878 / IEC 60684		

Sizes

4 standard constructions

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

Order designation	Configuration	Core / stranding	Outer Ø ≈ mm	Weight ≈ kg/km	Tensile load kN ≈	Min. bend R mm
HFPS-3020-19 Construction Schedule (−65…+200 °C) 4 sizes						
☐ HFPS-2024-19 (20 kVDC AWG 24)	1 × AWG 24 (0.24 mm²)	19/36 AWG SPC	2.1	8	0.1	13
☐ HFPS-3020-19 (30 kVDC AWG 20)	1 × AWG 20 (0.62 mm²)	19/32 AWG SPC	2.9	16	0.2	18
☐ HFPS-4018-19 (40 kVDC AWG 18)	1 × AWG 18 (0.96 mm²)	19/30 AWG SPC	3.8	27	0.3	23
☐ HFPS-5016-19 (50 kVDC AWG 16)	1 × AWG 16 (1.23 mm²)	19/29 AWG SPC	4.6	39	0.4	28

– Custom core counts, cross-sections, sheath colours and factory-tested cut lengths available per MIL-DTL-16878 / IEC 60684.

Electrical, optical & thermal parameters

4 sizes

Configuration	Max. DC R_{20} / Atten. Ω/km or dB/km	Rating / Capacity	Operating temp.
1 × AWG 24 (20 kVDC)	78.50	20 kVDC / 45 kVDC test	−65…+200 °C
1 × AWG 20 (30 kVDC)	30.20	30 kVDC / 65 kVDC test	−65…+200 °C
1 × AWG 18 (40 kVDC)	19.40	40 kVDC / 85 kVDC test	−65…+200 °C
1 × AWG 16 (50 kVDC)	14.70	50 kVDC / 100 kVDC test	−65…+200 °C

– Every production length undergoes routine conductor DC resistance, high-voltage dielectric and dimensional verification.

Standards and approvals

- MIL-DTL-16878 Compliant
- EN 10204 3.1 Factory Test Certificate
- CE, RoHS 2 (2011/65/EU) & REACH

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/hfps-3020-19-30kvdc-silicone-bondable-fep-hv-potting-wire

Typical values for this cable type, based on MIL-DTL-16878 / IEC 60684. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.