



NACE SP0169 PVDF/HMWPE CP cable

PVDF-HMWPE Cathodic Protection Cable

600 V DC dual-extruded PVDF fluoropolymer + HMWPE ICCP deep-anode lead cable



NACE SP0169 · 600 V DC ICCP

20 mil PVDF + 65 mil HMWPE

ASTM D3222 & ASTM D1248

Application

Classic dual-extruded Impressed Current Cathodic Protection (ICCP) deep-anode bed lead cable (PVDF-HMWPE) manufactured to NACE SP0169, ASTM D3222 and ASTM D1248 with a 20 mil (0.51 mm) Polyvinylidene Fluoride (PVDF) primary chlorine/bromine barrier and.

Typical uses: Deep-Well Pipeline & Refinery ICCP Groundbeds, Brine, Brackish & Marine Impressed-Current Anode Beds, Chemical Plant & Tank Farm Subsurface Corrosion Control, Well-Casing Cathodic Protection Systems

Construction



Cross-section, not to scale

- 1 Concentric-lay stranded bare (or tinned) copper
- 2 Primary PVDF fluoropolymer gas & acid barrier
- 3 Heavy-duty HMWPE outer mechanical & moisture jacket

Technical data

Typical values

Rated operating voltage	600 V DC / AC continuous	Factory spark & water-immersion HV test	10 kV AC dry spark test + 5.0 kV AC water-tank dielectric withstand test
Insulation resistance @ 20 °C	≥ 5,000 MΩ·km	Continuous operating temperature	−40 °C to +75 °C (outer HMWPE limit; inner PVDF rated to +135 °C)
Thermal cycling & overload stability	Verified thermal ageing and short-circuit withstand per standard	Dual-layer wall thickness	0.51 mm (20 mil) PVDF + 1.65 mm (65 mil) HMWPE (#10–#2 AWG)
Tensile strength & elongation	PVDF ≥ 35 MPa · HMWPE ≥ 19 MPa (≥ 600 % elongation)	Minimum bending radius	8 × OD (borehole lowering) · 6 × OD (fixed)
Halogen, acid & hydrocarbon resistance	Inert to wet Cl ₂ , Br ₂ , HCl, H ₂ SO ₄ and aromatic/aliphatic hydrocarbons	Environmental stress-crack resistance	F ₀ > 1,000 hours per ASTM D1693 Condition C on HMWPE jacket
Standards	NACE SP0169 (AMPP), ASTM D3222, ASTM D1248, ASTM B8 & ICEA S-95-658		

Sizes

7 standard constructions

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

Order designation	AWG / Metric	Rating	Outer Ø ≈ mm	Copper kg/km	Weight ≈ kg/km	Max. DC cur. A	Min. bend R mm
600 V DC Dual-Extruded PVDF / HMWPE Deep-Anode CP Cables 7 sizes							
☐ PVDF/HMWPE 1×10 AWG	10 AWG (5.26 mm ²) · 7W	600 V DC	7.8	47	82	40	62
☐ PVDF/HMWPE 1×8 AWG	8 AWG (8.37 mm ²) · 7W	600 V DC	8.8	75	120	55	70
☐ PVDF/HMWPE 1×6 AWG	6 AWG (13.3 mm ²) · 7W	600 V DC	9.8	119	172	75	78
☐ PVDF/HMWPE 1×4 AWG	4 AWG (21.2 mm ²) · 7W	600 V DC	11.3	189	252	95	90
☐ PVDF/HMWPE 1×2 AWG	2 AWG (33.6 mm ²) · 7W	600 V DC	13.0	300	378	130	104
☐ PVDF/HMWPE 1×1/0 AWG	1/0 AWG (53.5 mm ²) · 19W	600 V DC	15.6	478	582	175	125
☐ PVDF/HMWPE 1×2/0 AWG	2/0 AWG (67.4 mm ²) · 19W	600 V DC	16.8	603	718	200	134

– Custom spool lengths pre-cut to individual deep-well anode depths (e.g. 50 m, 80 m, 120 m) are supplied on request.

Standards and approvals

- ✓ NACE SP0169 / AMPP Deep-Anode ICCP Compliant
- ✓ ASTM D3222 (PVDF) & ASTM D1248 (HMWPE) Certified
- ✓ 100 % Tank HV Holiday-Free Tested

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/pvdf-hmwpe-dual-extruded-impressed-current-cathodic-protection-anode-lead-cable



Typical values for this cable type, based on NACE SP0169 / ASTM D3222 / ASTM D1248 / ICEA S-95-658. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.