



ASTM B869 CCS HMWPE utility tracer wire

CCS HMWPE Tracer Wire

ASTM B869 21% IACS copper-clad steel 30/45 mil HMWPE direct-burial & HDD locator tracer



ASTM B869 (21% IACS)

30 / 45 mil HMWPE

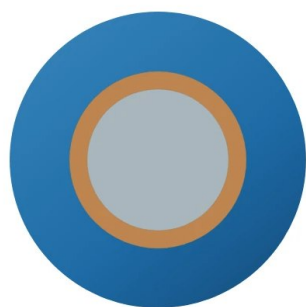
Up to 4,700 lbf HDD

Application

Direct-burial and Horizontal Directional Drilling (HDD) underground utility locator tracer wire combining a 21 % IACS metallurgically clad carbon-steel conductor (ASTM B869, 14–8 AWG) with a 30 mil or 45 mil APWA colour-coded HMWPE/HDPE jacket (up to).

Typical uses: PE Natural Gas Distribution & Transmission Mains, Municipal Potable Water & Force-Main Sewer Pipes, Horizontal Directional Drilling (HDD) & Pipe Bursting, Reclaimed Water, Irrigation & Storm Drain Networks, Fibre-Optic Microduct & Non-Metallic Conduit Locating

Construction



Cross-section, not to scale

- 1 High-strength carbon steel structural core
- 2 Metallurgical oxygen-free copper cladding (21 % IACS)
- 3 30 mil or 45 mil HMWPE / HDPE direct-burial jacket

Technical data

Typical values

Conductivity	21 % IACS minimum at 20 °C (ASTM B869)	Rated voltage	30 V or 600 V direct burial (UL / ICEA S-95-658)
In-line DC / AC spark test	7.5 kV AC / 10 kV DC 100 % spark tested	Insulation resistance	≥ 25,000 MΩ·km at 20 °C
Direct-burial temperature rating	–55 °C to +75 °C wet/dry	Installation & storage temperature	–40 °C to +70 °C
Gauge range	14 AWG (1.63 mm), 12 AWG (2.05 mm), 10 AWG (2.59 mm), 8 AWG (3.26 mm)	Break load (12 AWG DSA / HS / EHS)	300 lbf (1.33 kN) DSA · 680 lbf (3.02 kN) HS · 1,150 lbf (5.12 kN) EHS
Break load (10 AWG / 8 AWG EHS)	2,030 lbf (9.03 kN) 10 AWG EHS · 2,800–4,700 lbf 8 AWG / 7×EHS	Jacket wall thickness	30 mil (0.76 mm) or 45 mil (1.14 mm)
Environmental stress crack (ESCR)	ASTM D1693 > 1,000 h zero failures	Chemical & soil immunity	Resistant to H ₂ S, methane, chlorides, acids & bentonite drilling mud
Standards	ASTM B869 (Annealed) · ASTM B910 / ASTM B452 (Hard-Drawn)		

Sizes

12 standard constructions

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

Order designation	Conductor Size & Temper	Wall mil (mm)	Break Load lbf (N)	DC Res @20°C Ω/km	Overall OD mm (in)	Weight kg/km
Open-Trench & Light Bore Grades — Annealed (DSA) & High-Strength (HS) 30 mil HMWPE 6 sizes						
☐ TW-CCS-14AWG-DSA-30	14 AWG (1.63 mm) DSA Annealed	30 (0.76)	205 (912)	39.2	3.15 (0.124")	21.5
☐ TW-CCS-12AWG-DSA-30	12 AWG (2.05 mm) DSA Annealed	30 (0.76)	300 (1,334)	24.6	3.58 (0.141")	31.8
☐ TW-CCS-10AWG-DSA-30	10 AWG (2.59 mm) DSA Annealed	30 (0.76)	475 (2,113)	15.5	4.11 (0.162")	48.2
☐ TW-CCS-14AWG-HS-30	14 AWG (1.63 mm) High-Strength	30 (0.76)	425 (1,890)	39.8	3.15 (0.124")	21.5
☐ TW-CCS-12AWG-HS-30	12 AWG (2.05 mm) High-Strength	30 (0.76)	680 (3,025)	25.0	3.58 (0.141")	31.8
☐ TW-CCS-12AWG-HS-45	12 AWG (2.05 mm) High-Strength	45 (1.14)	680 (3,025)	25.0	4.34 (0.171")	36.5
Horizontal Directional Drilling (HDD) & Pipe-Bursting Grades — EHS 45 mil HMWPE/HDPE 6 sizes						
☐ TW-CCS-12AWG-EHS-45	12 AWG (2.05 mm) Extra-High-Strength	45 (1.14)	1,150 (5,115)	25.4	4.34 (0.171")	36.8
☐ TW-CCS-10AWG-HS-45	10 AWG (2.59 mm) High-Strength	45 (1.14)	1,100 (4,893)	15.8	4.88 (0.192")	53.5
☐ TW-CCS-10AWG-EHS-45	10 AWG (2.59 mm) Extra-High-Strength	45 (1.14)	2,030 (9,030)	16.0	4.88 (0.192")	54.0
☐ TW-CCS-8AWG-EHS-45	8 AWG (3.26 mm) Extra-High-Strength	45 (1.14)	2,800 (12,455)	10.1	5.54 (0.218")	81.5
☐ TW-CCS-7X14-EHS-45	7×0.064" Stranded EHS Pipe-Burst	45 (1.14)	4,700 (20,906)	6.2	7.16 (0.282")	152.0
☐ TW-CCS-12AWG-EHS-60	12 AWG EHS Rock-Bore 60 mil	60 (1.52)	1,150 (5,115)	25.4	5.10 (0.201")	42.5

– All configurations are stocked in APWA Uniform Color Code jackets: Yellow (Gas), Blue (Potable Water), Green (Sanitary Sewer), Purple (Reclaimed Water), and Orange (Telecom).

Standards and approvals

- ✓ ASTM B869 / ASTM B910 21% IACS CCS Compliant
- ✓ ASTM D1248 / ICEA S-95-658 Direct-Burial Rated

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/copper-clad-steel-hmwpe-direct-burial-locator-tracer-wire



Typical values for this cable type, based on ASTM B869 / ASTM B910 / 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.