



Solid copper HMWPE utility tracer wire

# Copper HMWPE Tracer Wire

ASTM B3 / B1 solid & stranded 100 % IACS copper direct-burial utility locator wire with



100 % IACS Pure Cu

14 / 12 / 10 / 8 AWG

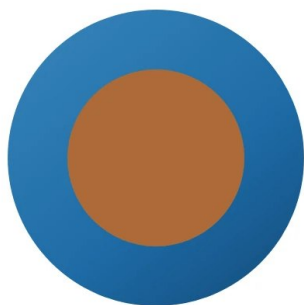
30 mil &amp; 45 mil HMWPE

## Application

Pure solid or 7-strand bare copper underground utility locator and cathodic protection wire (Copper HMWPE Tracer Wire) to ASTM B3 (soft-annealed) and ASTM B1 (hard-drawn) in 14, 12, 10 and 8 AWG, insulated with 30 mil (0.76 mm) or 45 mil (1.14 mm) APWA.

**Typical uses:** Open-Cut Municipal Natural Gas & Propane Polyethylene Mains, Potable Water, Fire-Main & Reclaimed Water PVC Pipelines, Sanitary Sewer, Storm Drain & Force-Main Locating, Cathodic Protection Anode Header & Test-Station Leads, Underground Fibre-Optic & Street-Lighting Duct Banks

## Construction



Cross-section, not to scale

- 1 100 % IACS solid or 7-strand bare copper (ASTM B3 / B1)
- 2 Primary HMWPE direct-burial moisture & dielectric barrier
- 3 30 mil (0.76 mm) or 45 mil (1.14 mm) HMWPE direct-burial jacket

## Technical data

Typical values

|                                    |                                                                              |                              |                                                                                                                               |
|------------------------------------|------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Rated voltage                      | 30 V (30 mil wall) · 600 V (45 mil heavy wall)                               | DC conductivity              | 100 % IACS min. (ASTM B3 soft) · 96.2 % IACS min. (ASTM B1 hard)                                                              |
| Max DC resistance (20 °C)          | 14 AWG: 8.28 Ω/km · 12 AWG: 5.21 Ω/km · 10 AWG: 3.28 Ω/km · 8 AWG: 2.06 Ω/km | Dielectric spark test        | 5.0 kV to 7.5 kV AC in-line 100 % spark test                                                                                  |
| Locating frequency range           | 512 Hz, 8 kHz, 33 kHz, 82 kHz + DC continuity                                | Operating temperature        | –55 °C to +75 °C (wet or dry direct burial)                                                                                   |
| Installation & storage temperature | –40 °C to +70 °C                                                             | Conductor sizes              | 14 AWG (2.08 mm <sup>2</sup> ), 12 AWG (3.31 mm <sup>2</sup> ), 10 AWG (5.26 mm <sup>2</sup> ), 8 AWG (8.37 mm <sup>2</sup> ) |
| Nominal break load (Soft B3)       | 14 AWG: 560 N · 12 AWG: 890 N · 10 AWG: 1,400 N · 8 AWG: 2,220 N             | Nominal break load (Hard B1) | 14 AWG: 950 N · 12 AWG: 1,500 N · 10 AWG: 2,350 N · 8 AWG: 3,650 N                                                            |
| HMWPE wall thickness               | 30 mil (0.76 mm) or 45 mil (1.14 mm)                                         | Soil & chemical resistance   | Impervious to humic acid, alkalis, methane & chlorides                                                                        |
| Environmental stress crack         | ASTM D1693 ESCR F0 > 1,000 h                                                 | Standards                    | ASTM B3 (Soft) · ASTM B1 (Hard-Drawn) · ASTM B8 (7-Strand)                                                                    |

## Sizes

12 standard constructions

Tick the sizes you need and send this page to [info@tebaoflex.com](mailto:info@tebaoflex.com) or WhatsApp +86 185 9591 3361.

| Order designation                                                                 | Size & Temper           | HMWPE Wall<br>mil (mm) | Cu OD<br>mm | Overall OD<br>mm | Break Load<br>N (lbf) | Max R20<br>Ω/km | Weight<br>kg/km |
|-----------------------------------------------------------------------------------|-------------------------|------------------------|-------------|------------------|-----------------------|-----------------|-----------------|
| ASTM B3 Soft-Annealed Solid Copper Tracer Wire (Open-Cut Trench Lay-In) 6 sizes   |                         |                        |             |                  |                       |                 |                 |
| <input type="checkbox"/> TW-CU-SOFT-14AWG-30MIL                                   | 14 AWG Solid Soft (B3)  | 30 (0.76)              | 1.63        | 3.15             | 560 N (126 lbf)       | 8.28            | 24.0            |
| <input type="checkbox"/> TW-CU-SOFT-14AWG-45MIL                                   | 14 AWG Solid Soft (B3)  | 45 (1.14)              | 1.63        | 3.91             | 560 N (126 lbf)       | 8.28            | 27.5            |
| <input type="checkbox"/> TW-CU-SOFT-12AWG-30MIL                                   | 12 AWG Solid Soft (B3)  | 30 (0.76)              | 2.05        | 3.57             | 890 N (200 lbf)       | 5.21            | 36.2            |
| <input type="checkbox"/> TW-CU-SOFT-12AWG-45MIL                                   | 12 AWG Solid Soft (B3)  | 45 (1.14)              | 2.05        | 4.33             | 890 N (200 lbf)       | 5.21            | 40.5            |
| <input type="checkbox"/> TW-CU-SOFT-10AWG-30MIL                                   | 10 AWG Solid Soft (B3)  | 30 (0.76)              | 2.59        | 4.11             | 1,400 N (315 lbf)     | 3.28            | 55.4            |
| <input type="checkbox"/> TW-CU-SOFT-10AWG-45MIL                                   | 10 AWG Solid Soft (B3)  | 45 (1.14)              | 2.59        | 4.87             | 1,400 N (315 lbf)     | 3.28            | 60.5            |
| ASTM B1 Hard-Drawn Solid & ASTM B8 7-Strand Copper Tracer / Cathodic Wire 6 sizes |                         |                        |             |                  |                       |                 |                 |
| <input type="checkbox"/> TW-CU-HARD-12AWG-30MIL                                   | 12 AWG Solid Hard (B1)  | 30 (0.76)              | 2.05        | 3.57             | 1,500 N (337 lbf)     | 5.38            | 36.2            |
| <input type="checkbox"/> TW-CU-HARD-12AWG-45MIL                                   | 12 AWG Solid Hard (B1)  | 45 (1.14)              | 2.05        | 4.33             | 1,500 N (337 lbf)     | 5.38            | 40.5            |
| <input type="checkbox"/> TW-CU-HARD-10AWG-45MIL                                   | 10 AWG Solid Hard (B1)  | 45 (1.14)              | 2.59        | 4.87             | 2,350 N (528 lbf)     | 3.39            | 60.5            |
| <input type="checkbox"/> TW-CU-HARD-8AWG-45MIL                                    | 8 AWG Solid Hard (B1)   | 45 (1.14)              | 3.26        | 5.54             | 3,650 N (820 lbf)     | 2.13            | 92.0            |
| <input type="checkbox"/> TW-CU-7STR-12AWG-45MIL                                   | 12 AWG 7-Strand Cu (B8) | 45 (1.14)              | 2.32        | 4.60             | 920 N (207 lbf)       | 5.32            | 42.0            |
| <input type="checkbox"/> TW-CU-7STR-10AWG-45MIL                                   | 10 AWG 7-Strand Cu (B8) | 45 (1.14)              | 2.95        | 5.23             | 1,450 N (326 lbf)     | 3.35            | 62.8            |

– All builds are stocked in APWA Yellow, Blue, Green, Purple, Orange, Red and Black on 500 ft, 1,000 ft and 2,500 ft spools.

## Standards and approvals

- ✓ ASTM B3 (Soft) / ASTM B1 (Hard) / ASTM B8 (Stranded) Copper
- ✓ ASTM D1248 30/45 mil Direct-Burial HMWPE

## 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/solid-copper-hmwpe-underground-utility-tracer-wire



Typical values for this cable type, based on ASTM B3 / ASTM B1 / ASTM D1248 / ICEA S-70-547. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.