



SOLID COPPER PE TRACER WIRE

MODEL: WR-TWSC

- Single conductor copper, HMWPE (High Molecular Weight Polyethylene) Insulated tracer/locator wire. HMWPE is a rugged and durable material considered excellent for moisture and abrasion resistance.
- This Product is used to conductively locate buried utility lines for the gas, water, sewer, telecommunication, and electrical markets.
- Available in 30 mil (30v) and 45 mil (600v) insulation for desired level of protection / LLDPE insulation available upon request.

IDENTIFICATION/PACKAGING

- Custom and standard print legends are available. 500 ft/spl, 1,000 ft/spl or 2,500 ft/spl are standard and packaged and labeled with product name, description, AWG, and manufacturer.



SPECIFICATIONS

- ASTM B-3: Standard specification for soft or annealed copper wire
- ASTM B170: Standard specification for oxygen-free electrolytic copper
- ASTM D1248: Standard specification for polyethylene plastic extrusion materials for wires & cable

CONDUCTOR (PHYSICAL, MECHANICAL & ELECTRICAL PROPERTIES)

PROPERTY	14 AWG	12 AWG	10 AWG	8 AWG
Conductor Type	Copper	Copper	Copper	Copper
Conductor Temper	Soft Drawn	Soft Drawn	Soft Drawn	Soft Drawn
Copper Grade	ASTM B49	ASTM B49	ASTM B49	ASTM B49
Break Strength	124 lbs.	197 lbs	313 lbs	479 lbs
Elongation	3%	5%	5%	5%
Nominal DC Resistance	2.525 ohms	1.588 ohms	0.999 ohms	0.628 ohms

INSULATION (PHYSICAL, MECHANICAL & ELECTRICAL PROPERTIES)

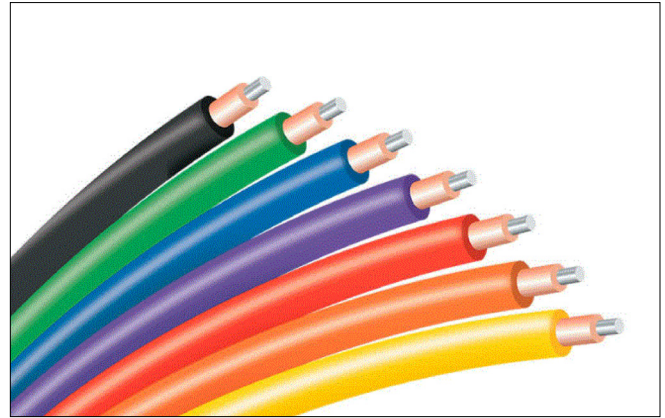
PHYSICAL PROPERTIES	TEST METHOD	UNIT	VALUE
Melt Index @ 5.0 Kgs, 190°C	ASTM D 1238	g/10 min	0.5
Density at 27°C	ASTM D 1505	g/cm3	0.945
Tensile Strength	ASTM D 638	MPa	30
Elongation	ASTM D 638	%	700
ESCR (10%IGEPAL) Fo	ASTM 1693	h	>100
OIT at 200 OC	ASTM D 3895	min	> 60
Shore D Hardness	ASTM D 2240	-	60
Dielectric Constant	ASTM D 150	-	2.35
Dissipation Factor	ASTM D 150	-	0.0003
Volume Resistivity	ASTM D 257	ohm-cm	1X10 ¹⁶



COPPER CLAD STEEL TRACER WIRE

DESCRIPTION

- Single conductor copper clad steel, HMWPE (high molecular weight polyethylene) Insulated tracer/locator wire
- Used to conductively locate buried utility lines for the gas, water, sewer, telecommunication, and electrical markets
- CCS is Designed to embody the flexible, memory, and feel of copper. It also has a 50% higher break-load, minimizing damage during installation and while in service equal to signal tracing performance of solid copper
- Available in 30 mil (30v) and 45 mil (600v) insulation for desired level of protection



SPECIFICATIONS

- ASTM B170 / B190M: Standard Specification for annealed Copper-Clad Steel Wire
- ASTM B170: Standard Specification for Oxygen-Free Electrolytic Copper
- ASTM D1248: Standard Specification for Polyethylene Plastic Extrusion Materials for wires & Cable

IDENTIFICATION/PACKAGING

- Custom and standard print legends are available. 500 ft/sp, 1,000 ft/sp and 2500 ft/sp spools are standard and packaged and labeled with product name, description, AWG, and manufacturer.

CONDUCTOR (PHYSICAL, MECHANICAL & ELECTRICAL PROPERTIES)

PROPERTY	18 AWG	16 AWG	14 AWG	12 AWG	10 AWG	8 AWG
Conductor Temper	Annealed	Annealed	Annealed	Annealed	Annealed	Annealed
Steel Grade	ASTM A-1004	ASTM A-1004	ASTM A-1004	ASTM A-1004	ASTM A-1004	ASTM A-1004
Copper Grade	ASTM B49	ASTM B49	ASTM B49	ASTM B49	ASTM B49	ASTM B49
Break Strength	70 lbs	111 lbs	177 lbs	282 lbs	488 lbs	713 lbs
Elongation ASTM 8869	≥ 15%	≥ 15%	≥ 15%	≥ 15%	≥ 15%	≥ 15%
Nominal DC Resistance	30.399 ohms	19.119 ohms	12.024 ohms	7.562 ohms	4.756 ohms	2.991 ohms

INSULATION (PHYSICAL, MECHANICAL & ELECTRICAL PROPERTIES)

PHYSICAL PROPERTIES	TEST METHOD	UNIT	VALUE
Melt Index @ 5.0 Kgs, 190°C	ASTM D 1238	g/10 MIN	0.5
Density at 27°C	ASTM D 1505	g/cm ³	0.945
Tensile Strength	ASTM D 638	MPa	30
Elongation	ASTM D 638	%	700
ESCR (10%IGEPAL) Fo	ASTM 1693	h	>100
OIT at 200 OC	ASTM D 3895	MIN	> 60
Shore D Hardness	ASTM D 2240	-	60
Dielectric Constant	ASTM D 150	-	2.35
Dissipation Factor	ASTM D 150	-	0.0003
Volume Resistivity	ASTM D 257	OHM-CM	1X10 ¹⁶