

SPECIFICATION SHEET

Main Office & Warehouse:

1275 Kyle Ct. Wauconda, IL 60084

Western Warehouse:

4000 East. US-6, Spanish Fork, UT 84660

HS-CCS PE30 Tracer Wire

(High Strength – Copper Clad Steel)



Specifications:

HS-CCS PE30 is used for tracer wire applications not exceeding 30 Volts. Tracer wire is used to conductively locate buried utility lines for the gas, water, sewer, telecommunication, and electrical markets. It is designed to embody the flexibility, memory, and feel of copper. It has 227% the break load of copper, greatly reducing damage and breaks during installations. Equal to copper in signal tracing performance. It simply outperforms copper tracer wire. Designed for open-cut and plow-in installations using 1 wire. Considerably lower in cost and great price stability compared to copper.

Insulation/Jacket info:

30MIL HDPE

Colors:

Black, Blue, Green, Orange, Purple, Red, White, & Yellow.

Sizes:

8 AWG (500', 1000' & 2500' Reels)
10 AWG (500', 1000' & 2500' Reels)
12 AWG (500', 1000' & 2500' Reels)
14 AWG (500', 1000' & 2500' Reels)
16 AWG (500', 1000' & 2500' Reels)
18 AWG (500', 1000' & 2500' Reels)

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CONDUCTOR (Physical, Mechanical and Electrical Properties)

PROPERTY	14 AWG	12 AWG	10 AWG	8 AWG
Conductor Type	HS-CCS	HS-CCS	HS-CCS	HS-CCS
Conductor Temper	Annealed	Annealed	Annealed	Annealed
Steel Grade	AISI 1055	AISI 1055	AISI 1055	AISI 1055
Copper Grade	UNS C10200	UNS C10200	UNS C10200	UNS C10200
Rated Break Load (Minimum)	282 lbs.	452 lbs.	685 lbs.	972 lbs.
Rated Tensile Strength (Minimum)	55,000 psi	55,000 psi	55,000 psi	55,000 psi
Elongation (ASTM B869)	≥ 15.0%	≥ 15.0%	≥ 15.0%	≥ 15.0%
Nominal Copper Thickness (% of Diameter)	3.0%	3.0%	3.0%	3.0%
Nominal Copper Weight (Per 1,000')	13.0%	13.0%	13.0%	13.0%
Nominal DC Resistance	12.024 ohms	7.562 ohms	4.756 ohms	2.991 ohms

Continued (18 AWG & 16 AWG)	18 AWG	16 AWG
Conductor Type	HS-CCS	HS-CCS
Conductor Temper	Annealed	Annealed
Steel Grade	AISI 1055	AISI 1055
Copper Grade	UNS C10200	UNS C10200
Rated Break Load (Minimum)	111 lbs.	117 lbs.
Rated Tensile Strength (Minimum)	87,500 psi	87,500 psi
Elongation (ASTM B869)	≥ 15.0%	≥ 15.0%
Nominal Copper Thickness (% of Diameter)	3.0%	3.0%
Nominal Copper Weight (Per 1,000')	13.0%	13.0%
Nominal DC Resistance	30.399 ohms	19.119 ohms

INSULATION & PRINTING (Physical, Mechanical and Electrical properties)

TEST DESCRIPTION	ASTM STANDARD	TYPICAL VALUES
Density @ 23°C	ASTM D1505	0.945 g/cm ³
Melt Flow Rate	ASTM D1238	0.70 g/10 min
Tensile Strength	ASTM D638	3,400 psi
Tensile Strength Retention	ASTM D638	90% after 48 hours @ 100°C
Tensile Elongation	ASTM D638	500%
Tensile Elongation Retention	ASTM D638	90% after 48 hours @ 100°C
Environmental Stress Cracking	ASTM D1693	0 failures @ 48 hours
Thermal Stress Cracking	ASTM D2951	0 failures @ 96 hours
Brittleness Temperature	ASTM D746	-76°C
Melting Temperature	ASTM D3418	260°C
Oxidative Induction Time	ASTM D3895	170 min @ 200°C
Dielectric Constant	ASTM D1531	2.32 @ 1 MHz
Dissipation Factor	ASTM D1531	0.00006 @ 1 MHz
DC Volume Resistivity @ 23°C	ASTM D257	> 1 x 10 ¹⁵ ohm-cm