



Copper PE30 Tracer Wire Solid or Stranded

Spec Sheet

PE30 Part# 740XXXXX (X = Variable Information)



DESCRIPTION:

- Oxygen-free dead soft annealed copper conductor
- High-density, high molecular weight polyethylene (HDPE) insulation
- Corrosion, moisture, chemical, acid, oil, impact, crush, and abrasion resistant
- For Direct Burial
- Available guages: 8 AWG | 10 AWG | 12 AWG | 14 AWG
- Available reel sizes: 500' | 1,000' | 2,500' | 5,000'
- Available insulation thickness: 30 mil (30v)
- All insulation spark tested @5000 VAC (30 mil)
- Insulation colors: Red | Yellow | Orange | Green | Blue | Purple | White | Black | Brown
- RoHS Compliant and works with connectors you already use

STANDARDS & REFERENCES:

Copper PE30 meets or exceeds all applicable UL Standards, ASTM specifications, and requirements of the National Electrical Code.

- 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 Plastics Extrusion Materials for Wire and Cable.

SAMPLE SPECIFICATION:

Tracer wire shall be a #12 AWG SOLID PRO-TRACE COPPER PE30. Tracer wire shall consist of a soft-drawn, oxygen free copper conductor with a minimum break load of 197 lbs. Conductor shall be extruded with a 30 mil, high density, high molecular weight polyethylene (HMW-HDPE) pursuant to ASTM D1248. Tracer wire shall be rated for direct burial use at 30 volts and RoHS compliant. Tracer wire shall be as manufactured by Trident Solutions or approved equal and made in the USA.

INSULATION (Physical, Mechanical and Electrical Properties)		
Density @ 23°C	ASTM D792	0.945 g/cm ³
Melt Flow Rate	ASTM D1238	0.8 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	0 failures @ -76°C
Melting Temperature	ASTM D3418	130 °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

CONDUCTOR (Physical, Mechanical and Electrical Properties)				
	14AWG	12AWG	10AWG	8AWG
Conductor Type	Copper			
Conductor Temper	Soft-Drawn			
Break Strength (lbs)	124	197	313	479
Elongation	3.0 %	5.0 %	5.0 %	5.0 %
Copper Thickness Solid (dia.)	0.0641"	0.0808"	0.1019"	0.1285"
Copper Thickness Stranded (dia.)	0.0726"	0.0915"	0.1155"	0.1458"
Product Weight Solid (Lbs Per 1,000')	16.0	24.0	37.0	62.0
Product Weight Stranded (Lbs Per 1,000')	17.0	25.0	39.0	64.0
Nominal DC Resistance (ohms)	2.525	1.588	0.999	0.628

WEIGHTS, MEASUREMENTS & PACKAGING (Solid)

Part Number	Product Description	Conductor O.D.	Finished O.D.	Insulation Thickness (Nominal)	Product Weight: Per 1,000'
74003.XXXX	14 AWG Solid Copper PE30 - 30V	0.0641"	0.124"	0.030"	16 lbs
74004.XXXX	12 AWG Solid Copper PE30 - 30V	0.0808"	0.141"	0.030"	24 lbs
74005.XXXX	10 AWG Solid Copper PE30 - 30V	0.1019"	0.162"	0.030"	37 lbs
74006.XXXX	8 AWG Solid Copper PE30 - 30V	0.1285"	0.189"	0.030"	62 lbs
74008.XXXX	14 AWG 7-STR Copper PE30 - 30V	0.0726"	0.133"	0.030"	17 lbs
74010.XXXX	12 AWG 7-STR Copper PE30 - 30V	0.0915"	0.152"	0.030"	25 lbs
74012.XXXX	10 7-AWG STR Copper PE30 - 30V	0.1155"	0.176"	0.030"	39 lbs
74014.XXXX	8 AWG 7-STR Copper PE30 - 30V	0.1458"	0.206"	0.030"	64 lbs