



TWU-UF Tracer Wire

Solid or Stranded

Spec Sheet

Part# 760XXXXX (X = Variable Information)



DESCRIPTION:

- Oxygen-free dead soft annealed copper conductor
- Polyvinyl Chloride (PVC) Insulation
- Corrosion, moisture, chemical, acid, oil, impact, crush, and abrasion resistant
- Suitable for use in direct burial applications at temperatures not to exceed -20°C or 60°C.
- Available gauges: 6 AWG | 8 AWG | 10 AWG | 12 AWG | 14 AWG
- Available reel sizes: 500' | 1,000' | 2,500' | 5,000'
- Available insulation thickness: 60 mil (600v)
- Insulation colors: Red | Yellow | Orange | Green | Blue | Purple | White | Black | Brown
- RoHS Compliant and works with connectors you already use

STANDARDS & REFERENCES:

SD-CU TWU-UF tracer wire meets or exceeds all applicable ASTM standards 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 D1238: Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer.

SAMPLE SPECIFICATION:

Tracer wire shall be a 12 AWG solid, SD-CU TWU-UF. Tracer wire shall consist of a soft-drawn, oxygen free copper conductor with a minimum break load of 197 lbf (38,500 psi). Conductor shall be extruded with a PVC insulation, and colored to meet the APWA color code of the buried utility line. Tracer wire shall be rated for direct burial use and RoHS compliant. Tracer wire shall be 12 AWG SOLID SD-CU TWU-UF as manufactured by Trident Solutions 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	6AWG
Conductor Type	Copper				
Conductor Temper	Soft-Drawn				
Break Strength (lbs)	124	197	313	479	762
Elongation	25.0 %	25.0 %	25.0 %	30.0 %	30.0 %
Tensile Strength (psi)	38,500	38,500	38,500	37,000	37,000
Nominal DC Resistance (ohms)	2.525	1.588	0.999	0.628	0.403

WEIGHTS, MEASUREMENTS & PACKAGING (Solid)

Part Number	Product Description	Nominal O.D.	Insulation Thickness (Nominal)	Copper Weight: Per 1,000'	Finished Weight: Per 1,000'
76003.XXXX	14 AWG Solid Copper TWU-UF - 600V	0.185"	0.060"	12.4 lbs	28 lbs
76004.XXXX	12 AWG Solid Copper TWU-UF - 600V	0.201"	0.060"	19.8 lbs	37 lbs
76005.XXXX	10 AWG Solid Copper TWU-UF - 600V	0.222"	0.060"	31.5 lbs	51 lbs
76006.XXXX	8 AWG Solid Copper TWU-UF - 600V	0.249"	0.060"	50 lbs	76 lbs
76008.XXXX	14 AWG 7-STR Copper TWU-UF - 600V	0.193"	0.060"	12.67 lbs	29 lbs
76010.XXXX	12 AWG 7-STR Copper TWU-UF - 600V	0.212"	0.060"	20.3 lbs	38 lbs
76012.XXXX	10 AWG 7-STR Copper TWU-UF - 600V	0.236"	0.060"	31.5 lbs	52 lbs
76014.XXXX	8 AWG 7-STR Copper TWU-UF - 600V	0.266"	0.060"	51 lbs	77 lbs
76016.XXXX	6 AWG 7-STR Copper TWU-UF - 600V	0.344"	0.080"	81 lbs	120 lbs