KRIS-TECH PRODUCT SPECIFICATIONS

PIPE BURST TRACER WIRE

FEATURES AND BENEFITS

- ✓ Much stronger than traditional pipe burst tracer wire and three times more conductive — 4,750 lb. break load
- ✓ Highly flexible, durable, and reliable
- ✓ Rugged 50 mil HDPE insulation
- ✓ 'Theft-resistant' (low aftermarket value) and stable price history compared to solid copper
- ✓ Rated for direct burial and color-coded to meet APWA standards
- ✓ Exclusively manufactured by Kris-Tech Wire

SNAP FOR MORE INFORMATION

APPLICATION

Kris-Tech Pipe Burst Tracer Wire is installed for pipe bursting and critical directional drilling applications where break load is essential.

DESCRIPTION

Kris-Tech Pipe Burst Tracer Wire is a stranded, copper-clad steel wire. With a breaking strength of 4,750 pounds, it is stronger and more conductive than stranded stainless steel wire traditionally used in pipe burst applications. Kris-Tech's pipe burst tracer wire has a durable, 50mils high-density polyethylene (HDPE) insulation.

PRODUCT DESCRIPTION

- ✓ Kris-Tech tracer wire is 7x7 stranded CCS hard drawn, high carbon conductor rated at 30 volts
- ✓ Insulated with 50 mil, high-density, high molecular weight polyethylene (HDPE) insulation rated for direct burial use at 1,000 volts
- ✓ HS-CCS conductor must meet or exceed 21% conductivity for locate purposes
- ✓ Break load of 4,750 lbs
- ✓ HDPE insulation is RoHS compliant and utilizes virgin-grade materials
- ✓ Insulation colors meet the APWA color code standard for buried utility identification

Spec: Pipe Burst Tracer Wire
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SPOOL LABEL

Wound wire on a compact spool made of plastic or wood.

CONDUCTOR

Kris-Tech Wire copper-clad steel wire is composed of a steel core with a uniform and continuous copper cladding completely bonded to the steel throughout.

INSULATION

The following is a description of the properties of the materials used in Kris-Tech dead soft annealed tracer wire insulation.

SPECIFICATIONS

PRINT LINE

- ✓ Permanent physical markings: surface print legend on insulation will repeat at a minimum interval of every two linear feet
- ✓ Print colors include all APWA color codes
- ✓ Kris-Tech wire 3/16" AWG SR-CCS tracer wire — 50mil HDPE 1000 volt for direct burial only

CLADDING

The steel and copper interface has a metallurgical bond achieved through a high heat and pressure bonding process — the established process for porosity-free material

- **Extra High Strength Steel**, with 0.54 carbon or greater, and verified to meet all required mechanical properties
- **Copper** is UNS-C10200, OF Copper as per ASTM B-170 (latest revision). High conductivity, oxygen-free copper is used to provide optimal signal performance
- **Surface Condition**. Wire surface shall be defect-free, including flakes, pits, voids, and grooves. Wire surface shall be smooth, with no excessive copper dust and residual drawing lubricants

PHYSICAL, MECHANICAL, & ELECTRICAL PROPERTIES

The wire shall conform to the properties listed in Table 1 & Table 2.

Table 1: Physical, Mechanical, and Electrical Properties

3/16" CCS 7x7 High Carbon Steel	21% CCS Conductor
1. General Specifications	
Wire Hardness	Extra High Strength (EHS)
Base Alloy Material	High Carbon Steel
2. Dimensions	
Diameter, nominal	4.762 mm / 0.187 in
Diameter, minimum	4.712 mm / 0.185 in
Cross Section Area, nominal	17.81 mm^2 / 34,414.7 cmil
New Weight	17.85 kg/km / 12.0 lb/kft
Copper Thickness, minimum	3% of Diameter
Density, typical	7.9900 g/cm^3 / 0.2884 lb/in^3
3. Electrical Specifications	
Electrical Conductivity (IACS), nominal	21%
DC Resistance, maximum	6.89 Ω/km, 2.1 Ω/kft
4. Mechanical Specifications	
Breaking Load, minimum	20,906.6 N / 4,700 lb
Tensile Strength, minimum	1,585.79 N/mm^2 / 2300,000 psi
Wire Elongation, minimum	1%

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MATERIAL DESCRIPTION

- ✓ Insulation is made up of a copolymer high molecular weight, natural high-density polyethylene (HDPE) designed explicitly for insulating high-strength copper clad steel wire
- ✓ It contains the obligatory levels and types of primary antioxidant and metal deactivator additives to meet most Wire and Cable industry requirements
- ✓ HDPE material is produced with an excellent balance of surface smoothness, tensile and elongation properties, processing ease, abrasion toughness, environmental stress crack, thermal stress crack resistance, and electrical consistency
- ✓ Insulation conforms to ASTM D1248

QUALITY ASSURANCE

All Kris-Tech products are manufactured with strict quality control to ensure all components are defect-free and meet or exceed performance requirements.

SPECIFICATIONS

Table 2: Physical, Mechanical, and Electrical Properties

High Density Polyethylene Insulator	Value
1. Physical Specifications	
Density (ASTM D1505)	0.948 g/cm^3
Melt Mass-Flow Rate (ASTM D1238)	0.80 g/10min
Brittleness Temperature (ASTM D746)	< -76.1°C
Environmental Stress-Cracking Resistance (ASTM D1693B)	
2. Mechanical Specifications	
Tensile-Yield (ASTM D638)	21.7 Mpa
Tensile-Break (ASTM D638)	16.2 Mpa
Tensile-Elongation (Break) (ASTM D638)	590%
3. Electrical Specifications	
Volume Resistivity (ASTM D257)	1.0E+18 ohms* cm
Dielectric Constant (ASTM D150)	2.33
Dissipation Factor (ASTM D150)	7.0E-05