Anhui Feichun Special Cable Co., Ltd.

安徽飞纯特种电缆有限公司

Industrial Cable Specification

600/1000V Hazardous Area Ground Wire & Bare Ground Wire

Product Overview

These cables are specifically engineered for use in Class 1, Division 2 hazardous locations commonly found in the oil, gas, and petrochemical industries. The product line includes both insulated ground wire (yellow-green) and bare ground wire configurations, offering comprehensive grounding solutions for critical industrial applications. These cables provide exceptional protection against aliphatic and aromatic hydrocarbons while meeting stringent safety standards for hazardous environments.

Featured Specifications

Cable Type	Size	Configuration	Color	Voltage Rating
Insulated Ground Wire	4/0 AWG	1C #4/0 AWG	Yellow-Green	600/1000V
Insulated Ground Wire	2/0 AWG	1C #2/0 AWG	Yellow-Green	600/1000V
Bare Ground Wire	4/0 AWG	1C #4/0 AWG	Bare Copper	N/A

Electrical Characteristics

Voltage Rating

600V (600/1000V for ground wire)

Temperature Rating

+90°C continuous operation

Conductor Material

Bare Annealed Stranded Copper

Conductor Class

Class B (Stranded) per ASTM B3/B8

Standards & Approvals

ICEA S-73-532 · UL 1277 · UL 83 · ASTM B3 · ASTM B8

All cables are manufactured in compliance with industry standards for hazardous location wiring and have been tested to meet the rigorous requirements of Class 1, Division 2 environments.

Construction Details

Insulated Ground Wire (Yellow-Green)

Conductor: Bare annealed stranded copper, meeting ASTM B3/B8 specifications for flexibility and conductivity

Insulation: Dual-layer system consisting of Polyvinyl Chloride Flame-Retardant (PVC-FR) and Nylon coating for enhanced mechanical and chemical protection

Ripcord: Nylon ripcord for easy jacket removal during installation

Outer Sheath: Special formulation PVC (Polyvinyl Chloride) designed to resist hydrocarbon exposure

Sheath Color: Black outer jacket with yellow-green insulated conductor

Core Identification: Color coded according to E2 standards per ICEA S-73-532

Bare Ground Wire

Conductor: Bare annealed stranded copper without insulation, providing direct grounding path

Construction: Concentric stranding for maximum flexibility and surface contact

Material: High-purity copper meeting ASTM B3/B8 specifications

Screened Cable Option

Screen: Aluminum foil screen for electromagnetic interference (EMI) protection

Drain Wire: Tinned copper drain wire for reliable screen grounding

Applications & Installation

Suitable Applications

Hazardous Area Classification: Class 1, Division 2 locations

Industry Applications: Oil refineries, gas processing plants, petrochemical facilities, offshore platforms, and chemical plants

Environmental Conditions: Approved for wet or dry locations, direct burial applications, and outdoor use in cable trays where sunlight resistance is required

Installation Methods

Cable Trays

Suitable for open and covered tray systems with proper support spacing

Wire Ways

Can be installed in metallic and non-metallic wire way systems

Cable Ducts

Appropriate for underground and above-ground duct installations

Conduits

Compatible with rigid and flexible conduit systems

Aerial Installation

Can be installed aerially when properly supported by messenger wires

Direct Burial

Approved for direct burial applications with proper depth and protection

Complete Technical Specifications

Parameter	Specification	Notes
Conductor Material	Bare Annealed Stranded Copper	ASTM B3/B8 compliant
Available Sizes	AWG 10, AWG 12, AWG 14, 2/0 AWG, 4/0 AWG	Custom sizes available upon request
Voltage Rating	600V (600/1000V for ground wire)	Suitable for medium voltage applications

Parameter	Specification	Notes
Temperature Rating	+90°C	Continuous operation maximum
Insulation Type	PVC-FR/Nylon	Flame retardant polyvinyl chloride with nylon coating
Outer Sheath	Special PVC	Hydrocarbon resistant formulation
Sheath Color	Black	UV and sunlight resistant
Ground Wire Color	Yellow-Green	Per international safety standards
Core Configuration	Up to 50 cores	Multicore configurations available
Chemical Resistance	Aliphatic & Aromatic Hydrocarbons	Tested against common petrochemical substances
Flame Rating	Flame Retardant	Meets UL vertical flame test requirements
Screen Type (when specified)	Aluminum Foil + Tinned Copper Drain	For EMI/RFI protection

Special Features & Benefits

Hydrocarbon Resistance

Special PVC formulation provides superior protection against both aliphatic and aromatic hydrocarbons commonly found in oil and gas environments

Flame Retardant

PVC-FR insulation meets stringent flame propagation requirements for hazardous area installations

Sunlight Resistant

Outer sheath is UV-stabilized for extended outdoor service life in exposed installations

Moisture Resistant

Approved for wet locations and direct burial applications with excellent moisture resistance

Flexible Construction

Stranded copper conductors provide flexibility for ease of installation in tight spaces and conduit

Easy Installation

Nylon ripcord allows for quick and clean jacket removal during termination

Safety & Compliance Information

⚠ Important Safety Information

These cables are designed for Class 1, Division 2 hazardous locations only. Installation must be performed by qualified electricians in accordance with local electrical codes, NEC (National Electrical Code), and applicable safety standards. Proper grounding and bonding procedures must be followed. Do not exceed the rated voltage or temperature specifications. Ensure proper support and strain relief for aerial installations.

Quality Assurance: Every cable is manufactured under strict quality control procedures and tested to ensure compliance with all applicable standards. Certificates of compliance and test reports are available upon request.

Additional Information

Custom Configurations: While this specification covers standard sizes 4/0 AWG and 2/0 AWG for ground wire applications, custom cable configurations, core counts, and sizes can be manufactured to meet specific

project requirements.

Technical Support: Our engineering team is available to assist with cable selection, installation guidance, and application-specific questions.

Delivery: Standard lead times apply for stock sizes. Custom configurations may require extended manufacturing time. Please consult with our sales team for current availability and delivery schedules.

FEICHUN SPECIAL CABLES

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