

Mining Power Feeder Cable — Type W, G & G-GC

MSHA Approved | Heavy-Duty Portable Power | Surface & Underground Mine Distribution

PRODUCT OVERVIEW

Mirabel Energy USA Type W, G, and G-GC mining power feeder cables are purpose-built for the most demanding portable power distribution environments in North American surface and underground mining operations. These heavy-duty portable cables deliver reliable power to draglines, shovels, drills, portable substations, and large mobile mining equipment where continuous flexing, mechanical abuse, chemical exposure, and harsh environmental conditions are the norm rather than the exception. Type W is the industry-standard heavy-duty portable cord for general mining applications. Type G is a mining-specific construction providing enhanced mechanical protection for equipment operating in rough terrain and abrasive environments. Type G-GC includes an integrated ground check conductor for continuous monitoring of the equipment grounding circuit — a critical safety feature mandated by MSHA 30 CFR Part 18 for underground mining equipment to detect ground fault conditions before they become life-safety events. All constructions are MSHA approved and UL 62 listed.

Up to 25kV Voltage Rating	90°C Conductor Temp	MSHA Approved Certification	G-GC: Ground Check Safety Feature
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APPLICATIONS

- Surface mine dragline and electric shovel power supply cables
- Underground mine portable substation and distribution feeder
- Large rotary drill and blast hole drill power cable
- Mine hoist and conveyor drive power supply cable
- Portable crushing and processing plant power distribution
- Open-pit mine bench-to-bench power feeder runs

KEY SPECIFICATIONS

- Type W: 600V–2kV heavy-duty portable cord, CPE jacket, UL 62
- Type G: 2kV–8kV mining feeder, enhanced mechanical protection, MSHA
- Type G-GC: integrated ground check conductor — MSHA 30 CFR Part 18
- EPR insulation: flexible, oil/chemical/moisture resistant, wide temp range
- CPE or CSPE (Hypalon) jacket: superior abrasion and cut resistance
- Flexible stranded copper conductors — maintains flexibility in cold temperatures
- Flame retardant construction — passes MSHA methane/fire resistance test
- Available with reduced concentric neutral for grounded system applications

TECHNICAL SPECIFICATIONS

Parameter	Type G (2kV–8kV)	Type G-GC (with GC)
Voltage Rating	2kV – 8kV	2kV – 8kV
Conductor Temp	90°C	90°C
Insulation	EPR	EPR
Jacket	CPE / CSPE	CPE / CSPE
Ground Check Cond.	No	Yes (integrated GC)
Certification	MSHA / UL 62	MSHA / UL 62
Flame Test	MSHA methane resist.	MSHA methane resist.

CONDUCTOR SIZES & CONFIGS #2 AWG – 500 kcmil 3/C, 4/C + ground Type W/G/G-GC MSHA approved	STOCKING LOCATIONS Reno, NV · Houston, TX Standard & project-phased delivery	OEM REPRESENTATIVE GCP Energy LLC — Salt Lake City, UT portal.gcpenergy.us
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Mining Trailing Cable — Type SHD & SHD-GC

Shielded High-Flex Trailing | Longwall · Continuous Miners · Roof Bolters | MSHA Approved

PRODUCT OVERVIEW

Mirabel Energy USA Type SHD and SHD-GC shielded high-flex trailing cables are the industry standard for powering continuous-motion underground coal and hard rock mining equipment — including longwall shearers, continuous miners, roof bolters, and feeder-breakers — where the cable is in constant motion, subject to repeated coiling and uncoiling, and must maintain dielectric integrity and ground circuit continuity under the most severe mechanical conditions in industry. The shielded construction (SHD) provides a copper tape or drain wire shield over each phase conductor for ground fault detection capability, while Type SHD-GC adds a dedicated ground check conductor that allows continuous online monitoring of the equipment grounding circuit. Under MSHA 30 CFR Part 18, ground check monitoring is mandatory for underground coal mining trailing cables — making SHD-GC the required construction for compliant longwall and continuous miner installations. Conductor assemblies use finely stranded, rope-lay copper for maximum flexibility and fatigue resistance through millions of flex cycles.

Up to 25kV Voltage Rating	Continuous Flex Duty Cycle	MSHA 30 CFR 18 Certification	SHD-GC: Ground Check Safety Feature
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APPLICATIONS

- Longwall shearer and powered roof support trailing cable
- Continuous miner trailing cable — underground coal and hard rock
- Roof bolter and scoop tram power cable
- Feeder-breaker and section conveyor power supply cable
- Underground mine power center to equipment trailing connection
- Any MSHA-regulated underground equipment requiring ground monitoring

KEY SPECIFICATIONS

- Type SHD: shielded, 2kV–25kV, continuous-flex trailing cable
- Type SHD-GC: adds integrated ground check conductor per MSHA 30 CFR 18
- Finely stranded rope-lay copper conductors — millions of flex cycles rated
- Individual phase shields: copper tape or drain wire, continuous ground path
- EPR insulation — maximum flexibility, rated -40°C to 90°C service
- CPE or CSPE jacket: oil/flame/abrasion resistant, MSHA flame test qualified
- Available 3-conductor + ground + GC configuration for complete MSHA compliance
- Armor or unarmored jacket options for varying mechanical protection needs

TECHNICAL SPECIFICATIONS

Parameter	Type SHD	Type SHD-GC
Voltage Rating	2kV – 25kV	2kV – 25kV
Phase Shields	Cu tape or drain wire	Cu tape or drain wire
Ground Check Cond.	No	Yes (MSHA req'd)
Conductor Stranding	Rope-lay (high flex)	Rope-lay (high flex)
Insulation	EPR	EPR
Jacket	CPE / CSPE	CPE / CSPE
Certification	MSHA / UL 62	MSHA / UL 62

CONDUCTOR SIZES & CONFIGS #4 AWG – 4/0 AWG 3/C + ground + optional GC SHD and SHD-GC MSHA approved	STOCKING LOCATIONS Reno, NV · Houston, TX Standard & project-phased delivery	OEM REPRESENTATIVE GCP Energy LLC — Salt Lake City, UT portal.gcpenergy.us
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Shuttle Car Cable & Mining Machine Cable

MSHA Approved | High-Cycle Flex · Abrasion Resistant | Underground Haulage & Machinery

PRODUCT OVERVIEW

Mirabel Energy USA shuttle car cable and mining machine cable are engineered for the extreme repetitive flex cycles, abrasion forces, and crushing loads encountered in underground haulage and machinery power applications. Shuttle car cable is specifically designed for the demanding coiling and uncoiling duty of underground coal shuttle cars — where the cable is stored on a reel drum and deployed and retrieved with every loaded and empty trip cycle, accumulating millions of flex cycles over a cable's service life. The conductor geometry, insulation compound, and jacket formulation are optimized to resist the fatigue, notching, and jacket cracking that prematurely ends the service life of standard portable cord in shuttle car applications. Mining machine cable serves stationary and slow-moving mining machinery requiring robust mechanical protection against roof falls, equipment traffic, and abrasive coal and rock surfaces while maintaining flexibility for equipment repositioning. Both cable types are MSHA approved and flame tested per 30 CFR Part 18.

Up to 600V Voltage Rating	High-Cycle Flex Duty Rating	Abrasion Resistant Jacket Grade	MSHA Certified Compliance
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APPLICATIONS

- Underground coal shuttle car reel drum power cable
- Coal and potash mine haulage unit trailing power cable
- Stationary mining machinery branch circuit and power feed
- Mine feeder-breaker and crusher stationary power connections
- Roof bolter, scoop, and ram car trailing power connections
- Underground conveyor drive and motor power cable runs

KEY SPECIFICATIONS

- Shuttle car: optimized conductor geometry for reel-drum coil/uncoil cycles
- Ultra-flexible fine-wire stranding — fatigue resistant under millions of flex cycles
- Heavy-duty CPE or CSPE jacket: superior abrasion, cut, and crush resistance
- EPR insulation: maintains flexibility from -40°C to 90°C operating range
- Reinforced jacket with embedded fabric braid option for max abrasion resistance
- MSHA flame resistance test qualified — 30 CFR Part 18 compliant
- Mining machine cable: extra-heavy jacket for stationary/slow-move protection
- Both types: oil, chemical, and moisture resistant construction

TECHNICAL SPECIFICATIONS

Parameter	Shuttle Car Cable	Mining Machine Cable
Voltage Rating	Up to 600V	Up to 600V
Primary Duty	High-cycle flex/reel	Stationary/slow move
Conductor	Extra fine-wire strand	Fine-wire stranded Cu
Insulation	EPR	EPR
Jacket	CPE (heavy-duty)	CPE/CSPE (extra heavy)
Abrasion Rating	Very high	Highest
Certification	MSHA / UL 62	MSHA / UL 62

CONDUCTOR SIZES & CONFIGS #6 AWG – #2/0 AWG 3/C + ground Shuttle car and mining machine grades	STOCKING LOCATIONS Reno, NV · Houston, TX Standard & project-phased delivery	OEM REPRESENTATIVE GCP Energy LLC — Salt Lake City, UT portal.gcpenergy.us
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Shipboard Cable — IEEE 1580 / MIL-DTL-24643

Naval & Commercial Vessel | Flame / Smoke / Halogen-Free | IEEE 1580 · MIL-SPEC

PRODUCT OVERVIEW

Mirabel Energy USA shipboard cable is manufactured to IEEE 1580 — the definitive North American standard for power, control, and instrumentation cable for use aboard naval and commercial vessels. IEEE 1580 imposes stringent requirements on flame resistance, smoke density, halogen content, and toxicity — designed to protect crew and ship systems in the enclosed, fire-vulnerable environments of shipboard compartments where standard industrial cable constructions are not acceptable. Mirabel shipboard cable is also available to MIL-DTL-24643 for naval vessel applications requiring full military specification compliance. IEC 60092 designs are available for international commercial vessel classification (ABS, DNV, Lloyd's Register, Bureau Veritas) requirements. All constructions feature tinned copper conductors for corrosion resistance in the salt air environment, XLPE or EPR insulation, and LSZH (Low Smoke Zero Halogen) or LSOH outer jackets that dramatically reduce toxic gas generation and smoke obscuration in shipboard fire events.

600V – 5kV Voltage Rating	90°C Temperature Rating	LSZH / Halogen-Free Jacket Requirement	IEEE 1580 Listed Standard
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APPLICATIONS

- US Navy surface combatant and submarine power and control wiring
- Commercial tanker, bulk carrier, and container ship electrical systems
- Coast Guard and other government vessel power distribution
- Offshore supply vessel (OSV) and anchor handling vessel power cable
- Cruise ship power, control, and lighting circuit wiring
- LNG carrier and chemical tanker electrical systems

KEY SPECIFICATIONS

- IEEE 1580 Type P (power) and Type C (control) constructions available
- MIL-DTL-24643 naval specification versions available on request
- Tinned copper conductors — corrosion resistant in salt air environments
- XLPE or EPR insulation — 90°C temperature rating, moisture resistant
- LSZH (Low Smoke Zero Halogen) jacket — IEC 60754 / IEEE 1202 compliant
- Passes IEEE 1202 vertical tray flame test and smoke density requirements
- IEC 60092 designs available for ABS, DNV, LR, and BV class certification
- Available in armored (interlocked Al armor) and unarmored constructions

TECHNICAL SPECIFICATIONS

Parameter	IEEE 1580 Power	IEEE 1580 Control
Voltage Rating	600V – 5kV	300V – 600V
Temperature Rating	90°C	90°C
Conductor	Tinned Cu stranded	Tinned Cu stranded
Insulation	XLPE or EPR	XLPE or EPR
Jacket	LSZH	LSZH
Flame Test	IEEE 1202 / ASTM E119	IEEE 1202
Standard	IEEE 1580 / IEC 60092	IEEE 1580 / IEC 60092

CONDUCTOR SIZES & CONFIGS #18 AWG – 500 kcmil 1/C, 3/C, multi-conductor IEEE 1580 Type P and C	STOCKING LOCATIONS Reno, NV · Houston, TX Standard & project-phased delivery	OEM REPRESENTATIVE GCP Energy LLC — Salt Lake City, UT portal.gcpenergy.us
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Marine Power Cable — Commercial Vessel & Port Infrastructure

600V – 35kV | Flexible Marine Grade | ABS / DNV / Lloyd's Register Certified

PRODUCT OVERVIEW

Mirabel Energy USA marine power cable delivers certified electrical power distribution solutions for commercial vessel propulsion systems, deck machinery, hotel loads, port shore power connections, and marine terminal infrastructure. Designed to meet the demanding combination of salt spray corrosion, UV exposure, mechanical flexing, vibration, fuel and lubricant contact, and the stringent fire performance requirements imposed by classification societies on all marine electrical systems. Marine power cables are engineered per IEC 60092 Part 353 (single-core non-armored), Part 354 (single-core armored), and Part 376 (multi-core) — with classification society type approval from ABS (American Bureau of Shipping), DNV (Det Norske Veritas), Lloyd's Register, and Bureau Veritas available. Available in 600V through 35kV voltage classes, with flexible EPR or XLPE insulation and moisture-resistant EPR or CSPE jacket for optimum performance in continuously marine-exposed environments.

600V – 35kV Voltage Range	90°C Temperature Rating	Salt/UV Resistant Jacket Grade	ABS / DNV / LR Classification
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APPLICATIONS

- Vessel main propulsion motor power cable and drive connections
- Ship service generator output and switchboard bus cable
- Deck machinery — windlass, winch, crane, and thruster power cable
- Shore power receptacle cable — cold ironing and port power systems
- Marine terminal overhead crane and gantry crane power supply
- Offshore supply vessel (OSV) deck power distribution

KEY SPECIFICATIONS

- IEC 60092 Part 353/354/376 — classification society type approved
- Available 600V through 35kV (MV marine class) voltage ratings
- EPR or XLPE insulation — flexible, moisture and salt-resistant
- EPR or CSPE outer jacket — oil, fuel, UV, and seawater resistant
- Armored (SWA or interlocked Al) and unarmored constructions
- Tinned copper conductors standard — maximizes salt air corrosion resistance
- ABS, DNV, Lloyd's Register, and Bureau Veritas type approvals available
- Flexible multi-core constructions for deck machinery and portable use

TECHNICAL SPECIFICATIONS

Parameter	LV Marine (600V)	MV Marine (6kV–35kV)
Voltage Rating	600V	6kV – 35kV
Temperature Rating	90°C	90°C
Insulation	EPR or XLPE	EPR or XLPE
Jacket	EPR or CSPE	EPR or CSPE
Aarmor	SWA or unarmored	SWA standard
Class Society	ABS / DNV / LR / BV	ABS / DNV / LR / BV
Standard	IEC 60092	IEC 60092

CONDUCTOR SIZES & CONFIGS #8 AWG – 1000 kcmil 1/C and multi-conductor Armored and unarmored	STOCKING LOCATIONS Reno, NV · Houston, TX Standard & project-phased delivery	OEM REPRESENTATIVE GCP Energy LLC — Salt Lake City, UT portal.gcpenergy.us
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Offshore Platform Cable — Oil, Gas & Renewable Energy

600V – 35kV | Fixed & Floating Platforms | UV · Salt · HC Resistant | IEC 60092 / API

PRODUCT OVERVIEW

Mirabel Energy USA offshore platform cable is purpose-engineered for the uniquely severe combination of electrical, mechanical, and chemical demands encountered on fixed and floating offshore oil and gas platforms, FPSOs, jack-up drilling rigs, semi-submersibles, and offshore renewable energy installations. Offshore platform cables must simultaneously withstand continuous UV and salt spray exposure on topsides, hydrocarbon contamination from drilling fluids and produced fluids, mechanical damage from equipment traffic and dropped objects, vibration from machinery and wave loading, and stringent fire performance requirements in hazardous area-adjacent installations. API RP 14F (Recommended Practice for Design, Installation, and Maintenance of Electrical Systems for Fixed and Floating Offshore Petroleum Facilities) is the primary North American offshore electrical standard, supplemented by IEC 60092 for international platform projects. Available in power, control, and instrumentation cable types with LSZH, mud-resistant, and hydrocarbon-resistant jacket formulations to meet specific platform zone requirements.

600V – 35kV Voltage Range	Hydrocarbon Resistant Jacket Grade	LSZH / Mud-Resistant Fire Performance	API RP 14F Offshore Standard
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APPLICATIONS

- Fixed platform topsides power distribution — LV and MV
- FPSO and semi-submersible power, control, and instrumentation cable
- Drilling rig MCC, VFD, and motor power cable (jack-up and semi-sub)
- Offshore wind turbine foundation and array cable (jacket/monopile)
- Tidal and wave energy device power export and control cable
- Subsea control umbilical companion cable — platform to wellhead

KEY SPECIFICATIONS

- API RP 14F and IEC 60092 compliant — offshore platform type approval
- LSZH jacket — reduced toxicity and smoke in enclosed platform modules
- Mud-resistant and hydrocarbon-resistant jacket variants for drill floor use
- Available 600V through 35kV (LV and MV offshore power distribution)
- Armored (SWA or interlocked AI) for mechanical protection in cable trays
- Sunlight and UV resistant jacket — rated for continuous topside exposure
- Instrument cable: IS + OS shielded pairs for SCADA and safety system wiring
- ABS, DNV, and Lloyd's Register type approval available

TECHNICAL SPECIFICATIONS

Parameter	Topsides Power	Instrument / Control
Voltage Rating	600V – 35kV	300V – 600V
Jacket Type	LSZH / HC resistant	LSZH / HC resistant
Insulation	XLPE or EPR	XLPE
Armor	SWA (standard)	SWA or unarmored
UV Resistance	Yes (topside rated)	Yes (topside rated)
API Standard	API RP 14F	API RP 14F
Class Society	ABS / DNV / LR	ABS / DNV / LR

CONDUCTOR SIZES & CONFIGS #14 AWG – 750 kcmil Power, control, instrumentation SWA armored LSZH	STOCKING LOCATIONS Reno, NV · Houston, TX Standard & project-phased delivery	OEM REPRESENTATIVE GCP Energy LLC — Salt Lake City, UT portal.gcpenergy.us
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Submersible Pump Cable — Water Well, Dewatering & Industrial

600V | Round & Flat Constructions | EPDM / PVC | Fresh & Salt Water Rated

PRODUCT OVERVIEW

Mirabel Energy USA submersible pump cable is the specified conductor for powering submersible electric pumps in water wells, municipal water supply systems, mine dewatering operations, industrial process water systems, and agricultural irrigation installations. Available in both round and flat constructions to accommodate different pump column pipe configurations and cable clipping requirements, submersible pump cable is designed for continuous immersion in fresh or salt water at depths from a few feet to several hundred feet — maintaining insulation integrity and conductor continuity over decades of service. EPDM insulation is the preferred option for deep-set and demanding applications, providing superior water resistance, flexibility, and long-term dielectric stability compared to PVC alternatives. Flat cable constructions are typically clipped to the pump drop pipe at regular intervals and pulled through narrow well casings; round constructions are used in larger borehole applications. Available with and without ground conductor, in 2-wire and 3-wire configurations for single-phase and three-phase pump motors.

600V Voltage Rating	75°C / 90°C Temperature Rating	Continuous Immersion Duty Rating	Round & Flat Constructions
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APPLICATIONS

- Municipal and private water supply well pump power cable
- Mine dewatering pump power supply — shallow and deep-set applications
- Agricultural center-pivot irrigation pump cables
- Industrial cooling tower and process water pump cable
- Geothermal heating system submersible pump power cable
- Fountain, decorative water feature, and aquaculture pump supply

KEY SPECIFICATIONS

- Round and flat constructions — compatible with all major pump configurations
- EPDM insulation: superior water-tree resistance, flexibility, long service life
- PVC insulation available for lower-cost shallow-well applications
- Moisture-resistant polypropylene or EPDM jacket — continuous immersion rated
- 2-wire (single-phase) and 3-wire (3-phase) conductor configurations
- Optional ground conductor in flat 3-wire constructions
- Rated for fresh and salt water immersion — #14 AWG through #2 AWG
- NEMA WC57 / UL 62 listed — well driller and pump contractor standard

TECHNICAL SPECIFICATIONS

Parameter	Round Construction	Flat Construction
Voltage Rating	600V	600V
Temperature Rating	75°C (PVC) / 90°C (EPDM)	75°C (PVC) / 90°C (EPDM)
Insulation	EPDM or PVC	EPDM or PVC
Jacket	PP or EPDM	PP or EPDM
Configurations	2-wire, 3-wire + gnd	2-wire, 3-wire + gnd
Conductor Sizes	#14 AWG – #2 AWG	#14 AWG – #2 AWG
Standard	NEMA WC57 / UL 62	NEMA WC57 / UL 62

CONDUCTOR SIZES & CONFIGS #14 AWG – #2 AWG Round and flat 2-wire and 3-wire EPDM or PVC insulation	STOCKING LOCATIONS Reno, NV · Houston, TX Standard & project-phased delivery	OEM REPRESENTATIVE GCP Energy LLC — Salt Lake City, UT portal.gcpenergy.us
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MSHA Flame-Resistant Cable — Compliance Reference

30 CFR Part 18 · Part 75 · Part 56/57 | Underground Coal · Metal/Nonmetal · Surface Mine

PRODUCT OVERVIEW

All Mirabel Energy USA mining cables supplied for underground and surface mine applications are manufactured, tested, and approved to the applicable Mine Safety and Health Administration (MSHA) regulations under 30 CFR. MSHA flame resistance testing subjects cable specimens to a controlled methane/air atmosphere ignition sequence — a uniquely severe test protocol that is significantly more demanding than standard UL or IEEE flame tests and directly reflects the mine fire and explosion hazard environment for which these cables must perform. 30 CFR Part 18 governs electrical equipment and trailing cables used with underground coal mine equipment. Part 75 covers underground coal mine safety standards including cable installation practices. Parts 56 and 57 govern surface and underground metal and nonmetal mines respectively. Mirabel mining cables span the full Type W / G / G-GC / SHD / SHD-GC construction range, providing a single-source MSHA-approved cable supply for complete mine electrical system compliance. Ground check conductor (GC) versions provide continuous ground circuit monitoring per MSHA requirements for underground coal equipment.

30 CFR Part 18 Underground Coal	30 CFR Part 75 Coal Mine Safety	30 CFR 56/57 Metal/Nonmetal	Flame Resistant All Constructions
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APPLICATIONS

- Underground coal mine trailing and feeder cable (30 CFR Part 18 / 75)
- Underground metal and nonmetal mine power cable (30 CFR Part 57)
- Surface mine power feeder and equipment cable (30 CFR Part 56)
- All applications where MSHA-approved flame-resistant cable is required
- Mine substations, transformers, and distribution panel feed cables
- Any cable requiring ground check conductor per MSHA ground monitoring mandate

KEY SPECIFICATIONS

- MSHA flame resistance test qualified — 30 CFR Part 18 methane/air test
- Full range: Type W, G, G-GC (feeder) and SHD, SHD-GC (trailing)
- All constructions: EPR insulation, CPE or CSPE jacket
- Ground check conductor (GC) versions for MSHA continuous ground monitoring
- Available with reduced concentric neutral for grounded-neutral mine systems
- 30 CFR Part 18 (underground coal), Part 56/57 (metal/nonmetal) compliant
- MSHA approval number traceable on cable reel marking and documentation
- Factory test certificates and MSHA approval documentation supplied with order

TECHNICAL SPECIFICATIONS

Cable Type	MSHA Regulation	Key Requirement
Type W Feeder	30 CFR Part 56/57	Flame resistant
Type G Feeder	30 CFR Parts 18/56/57	Flame + mechanical
Type G-GC Feeder	30 CFR Part 18	Flame + ground check
Type SHD Trailing	30 CFR Parts 18/75	Shielded + flame
Type SHD-GC Trailing	30 CFR Parts 18/75	Shielded + GC + flame
Shuttle Car Cable	30 CFR Parts 18/75	High-flex + flame
All Types	MSHA Approval No.	On reel marking + docs

CONDUCTOR SIZES & CONFIGS Full MSHA documentation and approval numbers supplied with every order	STOCKING LOCATIONS Reno, NV · Houston, TX Standard & project-phased delivery	OEM REPRESENTATIVE GCP Energy LLC — Salt Lake City, UT portal.gcpenergy.us
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