



safe-Tek™

**aetna**

INSULATED WIRE

Mining Products

**INNOVATION IN MINING CABLES**

**2013-2014**

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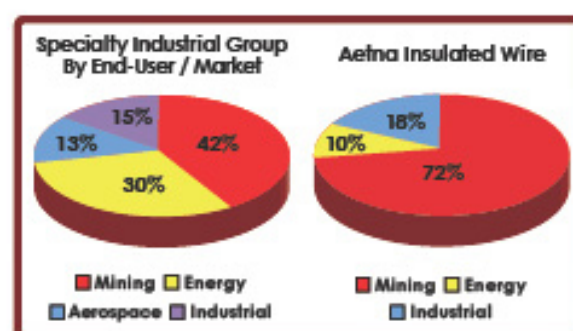
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## SPECIALTY INDUSTRIAL GROUP Three Companies-One Mission

It is my distinct pleasure to share with you the Marmon Specialty Industrial Group and our unwavering commitment to customer value through product innovation and superior customer service. Three specialty wire & cable businesses with one objective; to set ourselves apart by a simple credo that is the cornerstone of everything we do. *Focus on our customer; develop niche products that serve a preeminent and unique need, and continually improve our business to provide real and lasting value.*

The Marmon-Specialty Industrial Group is comprised of three, stand-alone businesses; *Aetna Insulated Wire*, *Dekoron Wire & Cable* and *TE Wire & Cable*. Though together they form the Specialty Industrial Group, their strengths are most realized though their individual commitment to their market served. Each end-user/market represents niche product technologies that are developed through understanding unique market needs. In collaboration with our end users, it is through diversity of ideas and application that the best solutions are found. It is this premise that drives us each and every day.



Few other places on earth provide the sheer engineering and safety challenge than the mining industry. It is here that *Aetna Insulated Wire* excels with a family of products designed for the most severe and unforgiving applications. I am pleased to introduce the **Safe-Tek™** family of mining products. A natural combination of Safety and Technology solutions targeted for the mining industry. From a history of innovative developments, we are excited to offer several, truly innovative products; unsurpassed by anything the competition has to offer. First, **Safe-Tek™ UltraGuard™**, the next generation proprietary, patented, product far exceeds performance characteristics of any competitive product in terms of life safety, equipment protection and environmental impact. Next, multiple products and technologies required to achieve a continuous vertical riser cable up to 3500 feet, increasing overall performance while dramatically reducing installation costs. **Safe-Tek™ UltraRiser™**, demonstrating continuous vertically suspended cabling solutions to 3500 feet. But this is just the beginning. At *Aetna Insulated Wire*, we pride ourselves on our custom cable solutions. Whether it's **UltraOmni™** mine shaft composite cables that combine fiberoptics, communication and control capabilities to increase flexibility and reduce life-cycle costs, advanced sensor technology to meet the most demanding applications or unique materials development, *Aetna* is your wire and cable source for Safety and Technology. You can count on that with **Safe-Tek™**. At *Aetna*, we're not the biggest, but we strive to be the best.

Our success depends on the relationship formed between our dedicated team and you, the Customer. Having the strength of Marmon and Berkshire-Hathaway behind us is very important, however, it is through our relationship that you will find an accessible, engaged and dedicated team of people ready to help. From **Walter Smith- Teck/Mining General Manager**, **Rick Williamson-Director of Engineering** or **Howard Jackson - Operations Manager**, we all stand ready to respond to your needs.

Gregory J. Smith  
President-Specialty Industrial Group



## AETNA INSULATED WIRE Not the Biggest-Just the Best

Aetna is a company whose lineage dates back more than 85 years but never more profound has the technology leadership been since the Marmon Group acquisition of Aetna in 1998. Over these years, Aetna's focus has not been trying to keep pace with industry giants, but rather take the path less traveled, focusing on becoming a solutions provider, with a clear 'value proposition'. Focus on what matters, focus on mine safety and technology through product innovation. That is why we are proud to introduce our Safe-Tek™ product family. Whether by unique materials, designs or manufacturing processes, Aetna has differentiated itself as a highly-responsive, niche player in the industry. A 'best-value' customer experience.....That is what counts. And that is what you get with Aetna Insulated Wire. An experience that includes; access to an experienced team of professionals who are easy to work with, an eagerness to solve problems and a commitment to flawless execution; from concept to delivery and installation. Our safety and technology based products will stand up to the most demanding environments.

From the inception of Mine Industry record keeping, mine worker health and safety has been a paramount concern. Never more apparent than the injuries and deaths related to the ever present danger of explosion and fire. And as mine technology drives mines deeper, the importance of critical system and life support are more important than ever. Thankfully, over a historical lifetime of technical evolution and legislative and mine management leadership has come an industry safer than it has ever been, better equipped with the latest technology and innovation to cope with the ever-present dangers that still confront the operators of deep mines, today.

### **THIS IS WHERE AETNA EXCELS!**



Aetna's history of mining cables have always included offerings such as Mine Power Feeder, Vertical Riser, HTRiser, MV variants to 46 kV Power Cables, Interlocked Armored, Teck and Gardex®, a continuous welded and corrugated armored cable, VFD and Tray Cable.

Our passion is our strength; developing Safety and Technology based solutions that provide a clear value proposition to our Customers. It is this approach that has inspired the development of the Safe-Tek™ family of custom offerings. Let us show you how we can help you meet your most demanding applications.

## AETNA ENGINEERING, A COLLABORATIVE PROCESS

### Never backing away from a challenge!

At Aetna, we take mine cables seriously. We don't like the 'cookie cutter', 'one-size fits-all' approach to cable selection. Instead, we prefer to work side-by-side with you. From understanding your requirements, developing solutions, rapid prototyping, and delivering a high quality product, you can trust Aetna to get it right. And speaking of quality, Aetna is an ISO9001 facility. All of our cables meet the relevant standards that you would come to expect; from UL, CSA, IEC, ICEA, AEIC and MSHA.



Rick Williamson, Director of Engineering



In addition to in-house resources, Aetna has the ability to access a variety of external and corporate resources for lab services and other engineering support. You will be hard-pressed to find a more approachable, committed and collaborative leadership team, eager to take ownership for our products. No bureaucracy, no roadblocks, just results. But it doesn't stop there..... Corporate responsibility to life safety and sustainability, and mine education is a critical element to our industry commitment. Additionally, several key members of our sales and engineering teams maintain MSHA safety certifications.

**COLLABORATION,  
AN IMPORTANT PART OF OUR SUCCESS!**



## AETNA MINING PRODUCTS

### Standard Offerings

*Aetna Insulated Wire* prides itself on a reputation of offering cables that exceed the unique and challenging performance demands of the mining industry.

#### Standards

*Aetna Insulated Wire and Cable* products are designed, manufactured and tested in accordance with the stringent requirements of the governing industry standards, including but not limited to: the American Standards of Testing and Materials (ASTM), the Association of Edison Illuminating Companies (AEIC), Underwriters Laboratories (UL), the Insulated Cable Engineers Association (ICEA), the Mine Safety and Health Administration (MSHA) and the Canadian Standards Association (CSA).

#### Conductors

*Aetna* manufactures copper only conductors in sizes #8 AWG to 1000 kcmil. The conductors are typically compact stranded to ASTM B496. Upon request, finned copper conductors are available, also Class C and D stranding options to ASTM B8. *Aetna* controls the quality of conductor by maintaining their own in-house drawing and stranding operations.

#### Insulation

*Aetna* manufactures 600-2kV cables using flame retardant cross-linked polyethylene in standard or VW-1 rated constructions.

Medium voltage cables are supplied as discharge free solid dielectric in either ethylene propylene rubber (EPR) or free retardant cross-linked polyethylene (TR-XLP) in voltage classes up to and including 46 kV with 100% insulation level.

#### Shielding/Neutrals

Shielded power cables are typically manufactured with a bare copper tape shield but finned copper tape is also available and custom tape overlaps or double tape layers can also be provided.

Standard concentric neutrals are provided with bare copper but are also available in finned copper upon request. Full, third or custom neutral applications can also be provided.

#### Assembly

Cables can be "packaged" as single conductor or two, three or four conductors. Multi-conductor cables are assembled with non hygroscopic or flame retardant fillers where necessary and industry appropriate ground sizes and ground checks can be supplied.

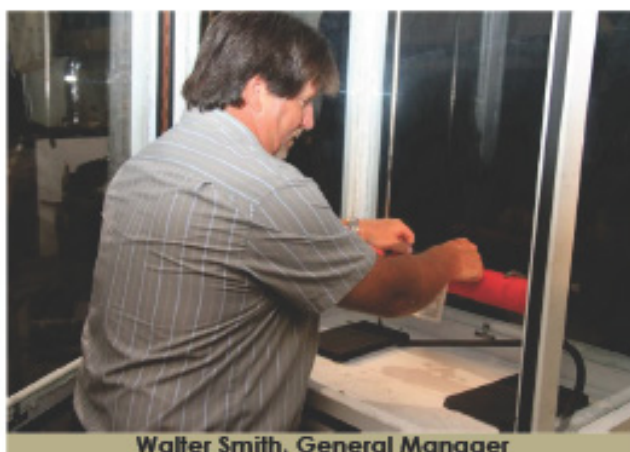
## AETNA MINING PRODUCTS

### Standard Offerings Continued



#### Armoring

Aetna Insulated Wire offers a number of standard armoring options. Armor of either aluminum interlocked (AIA) or galvanized steel interlocked (GIA) is available. Both are low profile in design and offer superior mechanical protection while still affording a surprisingly high degree of flexibility. Aetna also offers Gardex®, the moisture impervious continuously welded and corrugated (CWC) version of armor.



Walter Smith, General Manager



#### Jacketing

Cable jackets offer protection against mechanical damage, moisture ingress, corrosive atmospheres, flame propagation and smoke generation. To address these requirements Aetna Insulated offers a wide variety of jackets to best suit your needs:

- a) Linear Low Density Polyethylene (LLDPE) – for superior moisture resistance and durability
- b) Polyvinyl Chloride (PVC) – good flame retardancy and tensile strength
- c) Chlorinated Polyethylene (CPE) – good mechanical properties and resistance to chemicals
- d) Low Smoke Halogen Free (LSHF) – good mechanical and flame properties without generating halogens – available in thermoplastic or thermoset
- e) Chlorosulphanated Polyethylene (CSPE) – good mechanical properties and corrosion resistance



## AETNA Safe-Tek™ MINING PRODUCTS Custom Engineered

### UltraGuard™ Mine Power Feeder Cable

Aetna Insulated Wire offers a line of Mine Power Feeder Cables in copper conductor to 500 kcmil and up to 25 kV 133%. These cables are manufactured with the new UltraGuard system. Insulated cables are available with EPR insulation or TR-XLP insulation and exceed the strict requirements of the Mine Safety and Health Administration.

### UltraGuard™ Teck Cable

Aetna offers CSA certified Teck 90 and Medium Voltage Teck cables in sizes #8 AWG to 1000 kcmil and voltage levels to 46 kV 100% insulation level. Single and multi-conductor assemblies are available. These cables are typically supplied with a low temperature (-40C) PVC jacket but have been reengineered with the new UltraGuard system.

### Vertek\*

Cable specifically designed for vertical installations over 75 ft. but short enough where the conductors can support without damage the weight of the cable as it is lifted vertically into place and subsequently mounted to the side of the shaft or building.

### HTRiser™ Cable\*

HTRiser cable is designed specifically for use when the installation requires a single point of suspension or when the vertical installation is deep enough that the conductors cannot be used for supporting the cable during installation. This cable is custom designed using high tensile steel members integrated into the core of the cable to support the cable from the "inside out" and insuring that the tensile members are protected from the corrosive environment that is frequently found in mine ground water.

### UltraRiser™\*

When the design specification requires power to extend even deeper, UltraRiser cables are designed to reach new depths. Replacing the steel tensile members with new, lighter, stronger proprietary synthetic tensile members significantly reduces the overall cable weight and allows extended length to be engineered into the cable. These tensile members offer a 15% increase in breaking strength while reducing tensile member weight by as much as 60%. In applications where this technology can be applied with a non armored type of construction, the additional weight reduction translates into even longer supported lengths.

### LoneRiser™\*

This cable design is engineered to go the deepest. Its light weight and reduced diameter provides extended reach to this cable design. Simple, yet effective in its application this product reaches depths of 3000 to 4000 feet.

### UltraOmni™\*

Engineered vertical installation of any custom cable construction including instrumentation, control, optical fiber or composite cables.

\* Also available with the UltraGuard™ system

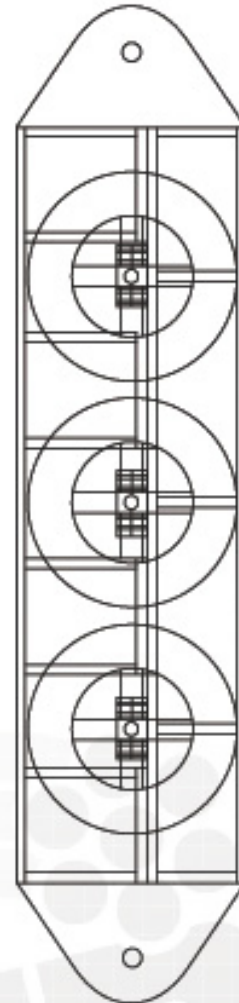


## AETNA MINING PRODUCTS

### Custom Engineered Products Continued

#### Riser Connector

Installing these deep mine riser cables can be daunting. No worries, Aetna is with you every step of the way. Cable installation time and safety of installation are primary considerations for deep mine cables. Aetna offers a family of connectors that allow the cable tensile members to be permanently installed to a "quick connect" attachment that reduces the installation time and eliminates the transfer of tensile components from the hoisting equipment to the point of permanent suspension.



#### SlimPack

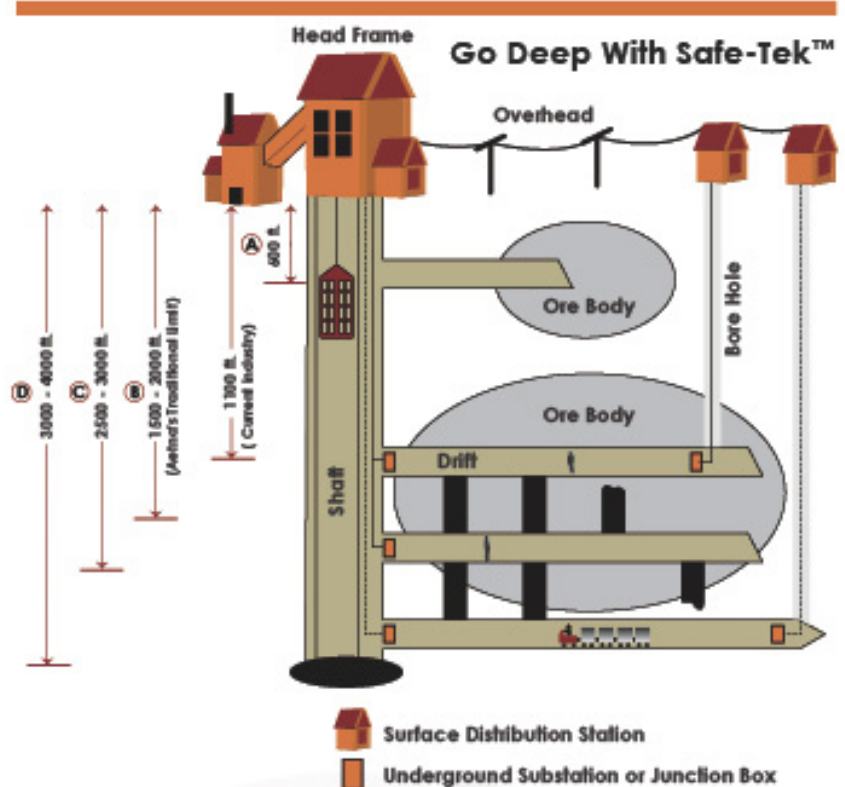
Used in conjunction with LoneRiser™, optional SlimPack was developed to facilitate installation of extended length cables.

## Introducing Safe-Tek™ UltraRiser™ Custom Continuous Vertical Riser Cables to 3500 Feet

No one knows better than you.....mine technology is always evolving. Demand is driving mines deeper and advances in mining technology are allowing it to happen safely and economically. But deeper mines require cost effective methods to deliver power for ventilation, operating equipment and safety systems.....

At Aetna, we know our role in your technology...This is why we developed Safe-Tek™ UltraRiser™. We know that the options to install vertical cables are costly and technically challenging. This is where Safe-Tek UltraRiser really shines. By combining the latest proprietary patented aerospace-based materials technology, we eliminate the downside alternatives to vertical riser specification. Safe-Tek UltraRiser is comprised of tensile members that are 15% stronger and 60% lighter weight than traditional designs making continuous vertical suspended runs of 3500 feet a snap. And it doesn't stop there.....Unique patented installation techniques for the application of the cable support members and the development of packaging and payoff delivery systems have given Safe-Tek UltraRiser cables the ability to meet your needs in a safe, cost-effective solution.

Whether its 5KV-46KV, multiple conductors, or multiple types of cable, (power, control, communication, fiber) you can rest easy with Safe-Tek™ UltraRiser™, knowing that the most demanding cable designs can keep pace with the most demanding mine applications.....Yours!



- A-Vertical Riser- Shallow drifts or drift to drift (clamped in place - no single point suspension)
- B-HTRiser™ - Steel tensile members armored in aluminum/galvanized steel
- C-UltraRiser™ - Synthetic fiber tensile member
- D-LoneRiser™ - Braided tensil support

Tensile Size	Steel Tensile Members		Synthetic Tensile Members	
	Breaking Strength (kpsi)	Weight (#/cft.)	Breaking Strength (kpsi)	Weight (#/cft.)
3/8"	15.1	26	18	4.3
1/2"	26.6	46	31	8
9/16"	33.6	59	38	11

## Safe-Tek™ UltraRiser™ Rise Height Comparison

CABLE CONSTRUCTION	4/0AWG 15kV 133% with 9/16" Tensile Member				500kcmil 15kV 133% with 5/8" Tensile Member			
	Weight (lbs/kft)	OD (inch)	Max Height (ft) SF 5	Max Height (ft) SF 7	Weight (lbs/kft)	OD (inch)	Max Height (ft) SF 5	Max Height (ft) SF 7
3/c Vertical Riser AL Armor	5440	3.16	870	620	9825	3.89	1100	810
3/c HT Steel Riser Steel Armor	9840	3.81	2060	1460	14370	4.33	1720	1228
3/c HT Steel Riser Alum Armor	8465	3.81	2400	1700	12795	4.33	1940	1228
3/c HT Steel Riser Non-Armor	7310	3.17	2760	1970	11530	3.69	2150	1530
3/c HT Syn Riser Alum Armor	7110	3.81	2950	2170	11150	4.33	2370	1700
3/c HT Syn Riser Non-Armor	5955	3.17	3526	2530	9885	3.69	2670	1900
1/c Braid Riser Non-Armor	1665	1.58	4200	3000	2800	1.84	3446	2460



Howard Jackson, Operations Manager



## INTRODUCING Safe-Tek™ UltraGuard™

With Safe-Tek™, safety and technology always go hand-in-hand. Safe-Tek™ UltraGuard™ is a case in point. When traditional cable jackets are involved in a fire, in minutes they can fill a confined space with smoke and generate halogens which chemically combine with water to form deadly gases.

- Smoke and deadly gases that hamper the safe and orderly escape of personnel
- Smoke and deadly gases that delay access and assessment
- Smoke and deadly gases that delay or impede rescue efforts and fire fighting activity

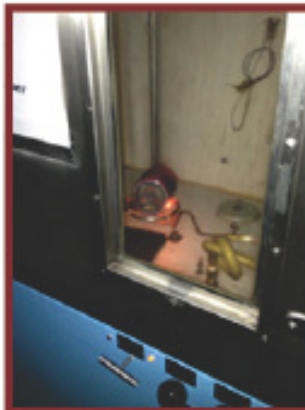
In addition; toxic and corrosive gases that attack electronic equipment essential to communication and the operation of safety equipment and fire fighting systems. Though this safety and technology challenge, Safe-Tek™ UltraGuard™ was developed. Combining proprietary materials science with unique design characteristics, allows Safe-Tek UltraGuard to achieve the industry leading performance of any product offering on the market. Independantly tested to E662, NES713 and Cone Calorimeter, not only is smoke and flame dramatically reduced, toxic gas emissions are lower than current product offering. These compounds reduce or eliminate the smoke and gas load in the fire area allowing safety systems to operate properly, allowing personnel improved visibility to evacuate the area and keeping the site clear to allow search and rescue efforts and clear access for firefighting crews.

No other cable comes close to match the performance characteristics of this new innovative product. With Safe-Tek UltraGuard, Safety and Technology ALWAYS go hand in hand.

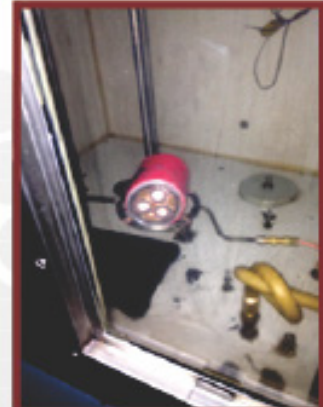
Move now to enhance your commitment to safety specify only Aetna Safe-Tek UltraGuard jacketing materials.

When minutes count, count on  
**Safe-Tek™ UltraGuard™**

Industry Standard



Safe-Tek™ UltraGuard™



ONE MINUTE

FIVE MINUTES

- 70% less smoke produced than PVC
- 50% lower toxicity than PVC
- 25% less smoke than the leading commercially available jacketing material

## Aetna Insulated Wire & Cable Other Standard Offerings

### Interlocked Armor Power Cables

For installation in aerial trays or underground ducts for power and control circuits. Used in manufacturing and processing plants, substations and generating stations. Available in galvanized steel or aluminum armor. Processed with EPR insulation 5KV through 46KV or XLP insulation 600V through 46KV.

### Preassembled Aerial Cable

Aerial cables are installed on pylons or poles, they may be cheaper to install than underground cables, as no work for digging is required, which can be very expensive in rocky areas. Supplying power to farms, waterworks, transmitters and other facilities outside urban areas. Optional constructions include: galvanized or stainless steel messengers, PVC coated copper, or PVC coated stainless steel strap.

### Tray Cable

Type TC and TC-ER made with XHHW-2, RHW-2 or RW90 insulation. Three or four conductor power cables rated at 600 volts, 90°C in dry or wet locations are permitted for use in Class I Division 2 industrial hazardous locations per NEC. Cables may be installed in free air, raceways or direct burial, in wet or dry locations.

### MV-90/MV-105 Power Cables

For general purpose applications in wet or dry locations, at conductor temperatures not exceeding 105°C for normal, 130°C for emergency overload. Suitable for installation in conduit, trays, troughs, ducts, aerial, and direct burial applications. EPR or XLP insulations 600V through 46KV in single conductor or multi conductor constructions.

### VFD Cable

VFD cables provide superior electrical performance and reliability, even in the most demanding industrial environments. VFD cables carry power from AC drive systems to AC motors. As a result, these VFD cables handle the overall high power levels of the pulse width modulated (PWM) signals.

### Jacket Options

Multiple jacket options are available for all constructions:

- Thermoplastic - PVC, CPE, LSOH or PE
- Thermoset - LSOH and CSPE

### Custom Design

Unique constructions, industry best lead-times, custom reels and emergency services are the areas where Aetna outperforms other cable manufacturers. Aetna's engineering staff is always ready to assist with application, design or installation issues or questions.

## MINE POWER FEEDER CABLE, TYPE MP-GC CROSS-LINKED POLYETHYLENE INSULATION (XLP/EPR) SHIELDED, 5000 TO 25000 VOLT

### SCOPE:

This specification covers Aetna Insulated Wire's standard construction for three conductor mine power feeder cables with two ground conductors and one ground check conductor. The cable is insulated with solid dielectric and an overall protective jacket. All power cables manufactured under this specification comply in all respects with the referenced specifications.

### PRODUCT SPECIFICATIONS AND RATINGS:

- i) ICEA S-75-381/NEMA WC58 Portable and Power Feeder Cables for Use in Mines and Similar Applications.
- ii) Federal Register 30 CFR Part 7K
- iii) Underwriters Laboratories 1072 for Medium Voltage Power Cables
- iv) ICEA S-93-839/NEMA WC74 Shielded Power Cable 5 - 48KV
- v) See individual product sheets for specific listings and ratings.

### APPLICATION:

Mine Power Feeder cables are recommended for use as primary power distribution cable in mines, mine tunnels and properly supported in shafts. All power cables manufactured under this specification are suitable for 5000 V to 25,000 V operation, at 100 and 133% insulation levels. MP-GC is suitable for aerial suspension, in direct burial applications, in ducts and in other semi-permanent mining or industrial feeder applications. The cable may be used in wet or dry locations at conductor temperatures of 90°C continuous, 130°C emergency overload and 250°C short circuit.

### CONSTRUCTION DATA:

**Conductors** - The conductor consists of uncoated soft copper strands meeting the requirements of ASTM B3. Unless otherwise specified the conductors are supplied as compact round per ASTM B498.

**Conductor Shield** - The conductor shield consists of an extruded semi-conducting layer meeting the requirements of the governing specifications above.

**Insulation** - The insulation is available in either ethylene propylene rubber (EPR) or tree retardent cross-linked polyethylene (TR-XLP) extruded concentrically over the conductor to the wall thickness as specified in the governing specifications listed and as shown on the individual product specification sheets.

**Insulation Shield** - Insulation shield consists of a semi-conducting extruded compound and a 5 mil bare copper metallic tape overlapped a minimum of 12 ½ %.

**Conductor Coding** - Phase identification is provided by a colored stripe on the insulation shield of each of the conductors (red, black, white).

**Ground Wires** - Cables include two stranded bare copper ground wires, one in each of two interstices.

**Ground Check Conductor** - One yellow insulated ground check conductor, size 8 AWG is located in the third interstice.

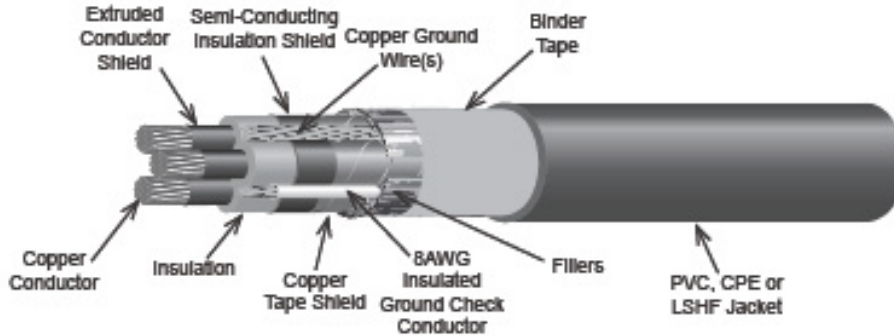
**Assembly** - Three insulated shielded conductors, two ground wires and one ground check conductor are cabled together. Suitable fillers are used in the interstices to round out the cable cross section. A mylar binder is applied over the assembly.

**Jacket** - A sunlight and ozone resistant jacket of polyvinyl chloride (PVC), chlorinated polyethylene (CPE) or low smoke halogen free (LSHF) polyolefin is extruded over the assembly. Optional jacket materials are available that offer alternative ratings and performance.

### AVAILABLE OPTIONS:

- a) (-40°C) PVC jacket
- b) Custom grounds

**MINE POWER FEEDER CABLE, TYPE MP-GC, 5000 VOLT**



90°C CONDUCTOR TEMPERATURE, WET OR DRY									
Conductor			Insulation In Mils	Jacket In Mils	Size AWG Copper Ground Wires	Approx- imate O.D. In Inches	Ampac- ity** 40°C Ambient	Approximate Net Weight Lbs/Kft	
Size AWG or KCMIL	No. of Strands	Nominal O.D In Inches						TR-XLP	EPR
<b>THREE CONDUCTOR 5000 VOLT 100% OR 133% INSULATION LEVEL, SHIELDED</b>									
6"	7	0.18	90	110	10	1.32	93	1055	1075
4"	7	0.23	90	110	8	1.42	122	1290	1315
2	7	0.27	90	110	6	1.51	159	1655	1680
1	19	0.30	90	110	5	1.58	184	1915	1940
1/0	19	0.34	90	110	4	1.66	211	2235	2265
2/0	19	0.38	90	110	3	1.75	243	2630	2665
3/0	19	0.42	90	110	2	1.85	279	3125	3165
4/0	19	0.48	90	140	1	2.02	321	3855	3895
250	37	0.52	90	140	1/0	2.12	355	4435	4485
350	37	0.62	90	140	2/0	2.33	435	5745	5800
500	37	0.74	90	140	4/0	2.59	536	7885	7950

Note: \*\*Based on one three conductor cable in free air per ICEA/NEMA.

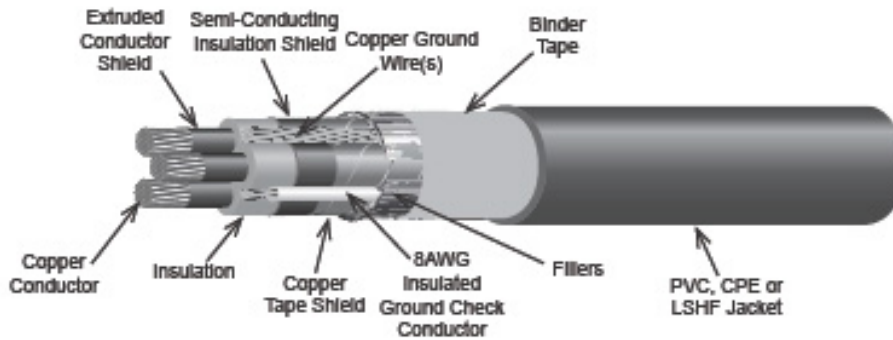
\*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

**STANDARDS AND RATINGS:**

1. Listed by MSHA CFR 30 Part 7K (PVC & CPE jacketed, and 4AWG & larger for PVC jacketed).
2. Listed by UL as Type MP-GC.
3. Conductors and materials conform to UL 1072 Medium Voltage Power Cable.
4. Conductors and materials conform to ICEA S-93-839 Shielded Power Cable 5 - 46KV.
5. Conforms to ICEA S-75-381/NEMA WC58 Portable and Power Feeder Cables for Use in Mines and Similar Applications.

**MINE POWER FEEDER CABLE, TYPE MP-GC, 8000 VOLT,  
100% INSULATION LEVEL**



90°C CONDUCTOR TEMPERATURE, WET OR DRY									
Conductor			Insulation in Mills	Jacket in Mills	Size AWG Copper Ground Wires	Approx- imate O.D. in Inches	Ampac- ity** 40°C Ambient	Approximate Net Weight Lbs/Kft	
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches						TR-XLP	EPR
<b>THREE CONDUCTOR 8000 VOLT 100% INSULATION LEVEL, SHIELDED</b>									
6"	7	0.18	115	110	10	1.43	93	1155	1185
4"	7	0.23	115	110	8	1.53	122	1395	1430
2	7	0.27	115	110	6	1.62	159	1765	1805
1	19	0.30	115	110	5	1.69	184	2025	2070
1/0	19	0.34	115	110	4	1.77	211	2355	2400
2/0	19	0.38	115	110	3	1.86	243	2755	2805
3/0	19	0.42	115	140	2	2.02	279	3370	3425
4/0	19	0.48	115	140	1	2.13	321	3995	4060
250	37	0.52	115	140	1/0	2.23	355	4585	4650
350	37	0.62	115	140	2/0	2.43	435	5905	5980
500	37	0.74	115	140	4/0	2.69	536	8060	8150

Note: \*\*Based on one three conductor cable in free air per ICEA/NEMA.

\*Compressed conductors.

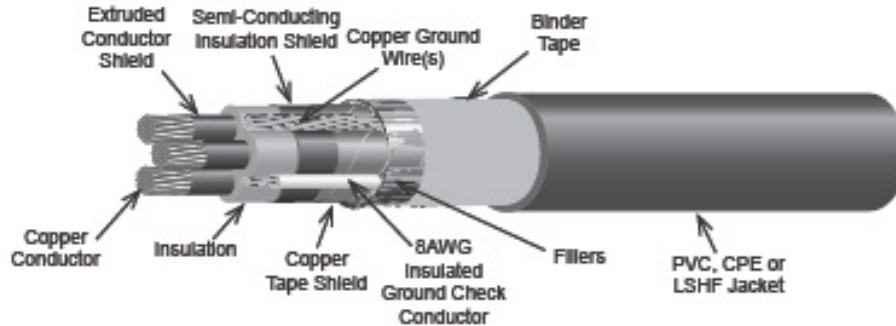
The above data is approximate and subject to normal manufacturing tolerances.

**STANDARDS AND RATINGS:**

1. Listed by MSHA CFR 30 Part 7K (PVC & CPE jacketed, 4AWG & larger for PVC jacketed).
2. Listed by UL as Type MP-GC.
3. Conductors and materials conform to UL 1072 Medium Voltage Power Cable.
4. Conductors and materials conform to ICEA S-93-639 Shielded Power Cable 5 - 48KV.
5. Conforms to ICEA S-75-381/NEMA WC58 Portable and Power Feeder Cables for Use in Mines and Similar Applications.



**MINE POWER FEEDER CABLE, TYPE MP-GC, 8000 VOLT,  
133% INSULATION LEVEL**



90°C CONDUCTOR TEMPERATURE, WET OR DRY									
Conductor			Insulation In Mils	Jacket In Mils	Size AWG Copper Ground Wires	Approx- imate O.D. In Inches	Ampac- ity** 40°C Ambient	Approximate Net Weight Lbs/Kft	
Size AWG or KCMIL	No. of Strands	Nominal O.D In Inches						TR-XLP	EPR
<b>THREE CONDUCTOR 8000 VOLT 133% INSULATION LEVEL, SHIELDED</b>									
6"	7	0.18	140	110	10	1.54	93	1260	1300
4"	7	0.23	140	110	8	1.64	122	1505	1555
2	7	0.27	140	110	6	1.73	159	1880	1935
1	19	0.30	140	110	5	1.80	184	2145	2205
1/0	19	0.34	140	140	4	1.94	211	2585	2650
2/0	19	0.38	140	140	3	2.02	243	3000	3070
3/0	19	0.42	140	140	2	2.13	279	3510	3590
4/0	19	0.48	140	140	1	2.24	321	4145	4230
250	37	0.52	140	140	1/0	2.34	355	4740	4830
350	37	0.62	140	140	2/0	2.54	435	6065	6170
500	37	0.74	140	140	4/0	2.80	536	8240	8360

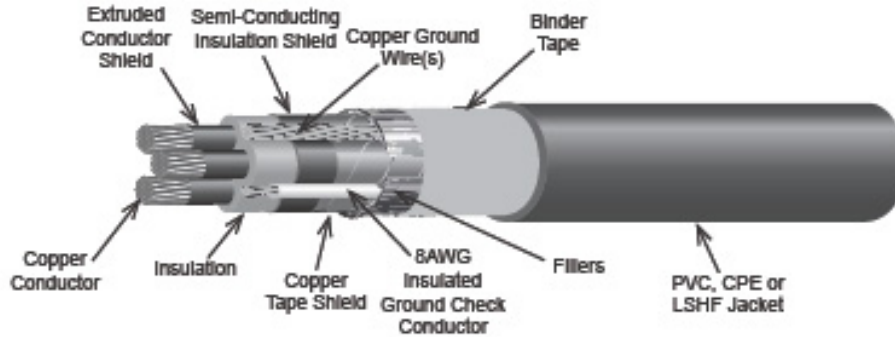
Note: \*\*Based on one three conductor cable in free air per ICEA/  
NEMA.  
\*Compressed conductors.

The above data is approximate and subject to normal manufactur-  
ing tolerances.

**STANDARDS AND RATINGS:**

1. Listed by MSHA CFR 30 Part 7K (PVC & CPE Jacketed).
2. Listed by UL as Type MP-GC.
3. Conductors and materials conform to UL 1072 Medium Voltage Power Cable.
4. Conductors and materials conform to ICEA S-93-639 Shielded Power Cable 5 - 48KV.
5. Conforms to ICEA S-75-381/NEMA WC58 Portable and Power Feeder Cables for Use in Mines and Similar Applications.

## MINE POWER FEEDER CABLE, TYPE MP-GC, 15000 VOLT



90°C CONDUCTOR TEMPERATURE, WET OR DRY									
Conductor			Insulation In Mills	Jacket In Mills	Size AWG Copper Ground Wires	Approx- imate O.D. In Inches	Ampac- ity** 40°C Ambient	Approximate Net Weight Lbs/Kft	
Size AWG or KCMIL	No. of Strands	Nominal O.D In Inches						TR-XLP	EPR
<b>THREE CONDUCTOR 15000 VOLT 100% INSULATION LEVEL, SHIELDED</b>									
2	7	0.27	175	140	6	1.94	164	2165	2245
1	19	0.30	175	140	5	2.01	187	2440	2525
1/0	19	0.34	175	140	4	2.09	215	2780	2870
2/0	19	0.38	175	140	3	2.18	246	3200	3295
3/0	19	0.42	175	140	2	2.28	283	3720	3825
4/0	19	0.48	175	140	1	2.39	325	4360	4455
250	37	0.52	175	140	1/0	2.49	359	4960	5085
350	37	0.62	175	140	2/0	2.69	438	6310	6450
500	37	0.74	175	170	4/0	2.95	536	8500	8665
<b>THREE CONDUCTOR 15000 VOLT 133% INSULATION LEVEL, SHIELDED</b>									
1	19	0.30	220	140	5	2.20	187	2695	2820
1/0	19	0.34	220	140	4	2.28	215	3045	3175
2/0	19	0.38	220	140	3	2.37	246	3475	3610
3/0	19	0.42	220	140	2	2.47	283	4005	4155
4/0	19	0.48	220	140	1	2.58	325	4655	4820
250	37	0.52	220	140	1/0	2.68	359	5270	5440
350	37	0.62	220	140	2/0	2.89	438	6635	6830
500	37	0.74	220	170	4/0	3.15	536	8855	9075

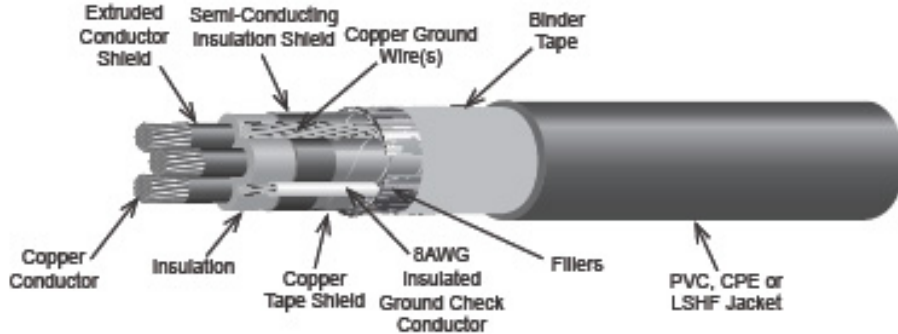
Note: \*\*Based on one three conductor cable in free air per ICEA/NEMA.

The above data is approximate and subject to normal manufacturing tolerances.

## STANDARDS AND RATINGS:

1. Listed by MSHA CFR 30 Part 7K (PVC & CPE Jacketed).
2. Listed by UL as Type MP-GC.
3. Conductors and materials conform to UL 1072 Medium Voltage Power Cable.
4. Conductors and materials conform to ICEA S-93-839 Shielded Power Cable 5 - 48KV.
5. Conforms to ICEA S-75-381/NEMA WC58 Portable and Power Feeder Cables for Use in Mines and Similar Applications.

**MINE POWER FEEDER CABLE, TYPE MP-GC, 25000 VOLT**



90°C CONDUCTOR TEMPERATURE, WET OR DRY									
Conductor			Insulation In Mils	Jacket In Mils	Size AWG Copper Ground Wires	Approx- imate O.D. In Inches	Ampac- ity** 40°C Ambient	Approximate Net Weight Lbs/Kft	
Size AWG or KCMIL	No. of Strands	Nominal O.D In Inches						TR-XLP	EPR
<b>THREE CONDUCTOR 25000 VOLT, 100% INSULATION LEVEL, SHIELDED</b>									
1	19	0.30	260	140	5	2.33	191	2880	3030
1/0	19	0.34	260	140	4	2.41	218	3235	3395
2/0	19	0.38	260	140	3	2.50	249	3665	3835
3/0	19	0.42	260	140	2	2.60	286	4205	4385
4/0	19	0.48	260	140	1	2.71	326	4865	5060
250	37	0.52	260	140	1/0	2.81	360	5485	5690
350	37	0.62	260	170	2/0	3.02	439	6865	7100
500	37	0.74	260	170	4/0	3.28	536	9100	9365
<b>THREE CONDUCTOR 25000 VOLT, 133% INSULATION LEVEL, SHIELDED</b>									
1	19	0.30	320	140	5	2.61	191	3480	3520
1/0	19	0.34	320	140	4	2.69	218	3850	3900
2/0	19	0.38	320	140	3	2.78	249	4300	4360
3/0	19	0.42	320	170	2	2.88	286	4860	4930
4/0	19	0.48	320	170	1	2.99	326	5545	5625
250	37	0.52	320	170	1/0	3.09	360	6180	6270
350	37	0.62	320	170	2/0	3.30	439	7605	7715
500	37	0.74	320	170	4/0	3.56	536	9890	10030

Note: \*\*Based on one three conductor cable in free air per ICEA/NEMA.

The above data is approximate and subject to normal manufacturing tolerances.

**STANDARDS AND RATINGS:**

1. Listed by MSHA CFR 30 Part 7K (CPE jacketed only).
2. Listed by UL as Type MP-GC.
3. Conductors and materials conform to UL 1072 Medium Voltage Power Cable.
4. Conductors and materials conform to ICEA S-93-639 Shielded Power Cable 5 - 48KV.
5. Conforms to ICEA S-75-381/NEMA WC58 Portable and Power Feeder Cables for Use in Mines and Similar Applications.

## TECK90 (MINUS 40°C) 600 TO 1000 VOLT, XLP INSULATION, ARMORED POWER CABLE, SINGLE AND MULTI-CONDUCTOR

### SCOPE:

This specification covers Aetna Insulated Wire's standard construction for single and multi-conductor TECK90 (-40°C) HL 600-1000 Volt armored power cables insulated with cross-linked polyethylene (XLP). The insulated conductors are cabled with a ground wire and the assembly covered with an inner polyvinyl chloride (PVC) jacket is encased in interlocked armor covering and with a protective polyvinyl chloride (PVC) jacket or alternatively, a jacket of low smoke halogen free (LSHF) polyolefin.

### PRODUCT SPECIFICATIONS AND RATINGS:

- Canadian Electrical Code (CEC), Part 1
- CSA C22.2 No. 131 Type Teck 90 Cable
- ICEA S-95-658/NEMA WC70 Nonshielded 0-2 kV Cables
- CSA C22.2 No. 38 Thermoset-Insulated Wires and Cables
- For ratings see the individual product specification sheets.

### APPLICATION:

All cables covered under this specification are suitable for 600V or 1000V operation at a maximum continuous conductor temperature of 90°C, an emergency overload temperature of 130°C and a short circuit condition of 250°C.

Type TECK90 cables are recognized by the CEC, Part 1, meet all the requirements therein and are certified to the relevant CSA standards. In addition the cables comply in all respects with the referenced ICEA standards. The cables are intended for use in industrial applications for power and, lighting and control circuits, in pulp and paper mills, mines and industrial plants. Teck cables are recommended for severe operating conditions, in wet and dry locations, installed in corrosive environments and are resistant to mechanical abuse and ozone attack. They may be installed in racks, trays, ladders and cable troughs. The cables have an FT-4 flame rating and are also rated for Hazardous Locations (HL).

### CONSTRUCTION DATA AND SPECIFICATIONS:

**Conductors** - The conductors consist of uncoated soft, copper strands meeting the requirements of ASTM B3. Unless otherwise specified the conductors are supplied as compact round per ASTM B496.

**Insulation** - The insulation is cross-linked polyethylene (XLP) extruded concentrically over the conductor to the wall thickness, as specified.

**Conductor Coding** - Phase identification, where applicable, is provided by a number code on each insulated conductor.

**Grounding Conductor** - In a single conductor cable the ground conductor is a serving of concentric bare copper wires applied helically over the insulated conductor. In multi-conductor assemblies, one stranded bare copper ground wire is located in one of the outer interstices.

**Assembly** - The assembly of multi-conductor cables is done by cabling together the required number of conductors and the ground wire with a left hand lay and a suitable number of fillers to give the core a round cross section. A binder tape is applied.

**Inner Jacket** - Over the cable core an inner polyvinyl chloride (PVC) or low smoke halogen free (LSHF) polyolefin jacket is extruded.

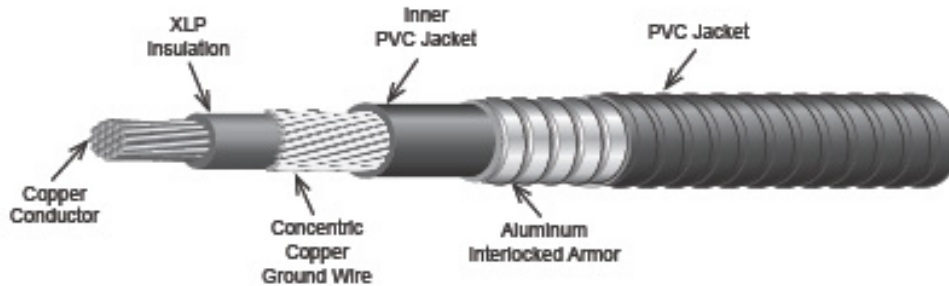
**Armor** - Over jacketed core an interlocking armor of either aluminum or galvanized steel is applied per the governing specification.

**Overall Jacket** - A protective sunlight and ozone resistant jacket of polyvinyl chloride (PVC) or low smoke halogen free (LSHF) polyolefin, suitable for installation in temperatures down to -40°C, is extruded for a tight fit over the interlocked armor.

### AVAILABLE OPTIONS:

- Custom ground configurations
- UL compliant for Dual Rating

## TECK90 (MINUS 40°C) HL CABLE, 600 VOLT, XLP (RW90)



90°C CONDUCTOR TEMPERATURE, WET OR DRY										
Conductor			Insulation in Mils	Inner Jacket in Mils	Total AWG Size Copper Ground Wire	Approximate O.D. in Inches			Ampacity** 30°C Ambient	Approximate Net Weight Lbs/100ft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches				Over Inner Jacket	Over Armor	Over Overall Jacket		
<b>SINGLE CONDUCTOR 600 VOLT</b>										
2	7	0.27	45	30	6	0.64	0.78	0.92	190	620
1	19	0.30	55	45	4	0.69	0.83	0.97	220	740
1/0	19	0.34	55	45	4	0.72	0.88	1.02	260	830
2/0	19	0.38	55	45	4	0.76	0.95	1.09	300	940
3/0	19	0.42	55	45	3	0.81	1.00	1.14	350	1110
4/0	19	0.48	55	45	3	0.86	1.05	1.19	405	1310
250	37	0.52	65	60	2	0.93	1.10	1.24	455	1510
300	37	0.57	65	60	2	0.98	1.15	1.29	500	1690
350	37	0.62	65	60	1	1.06	1.25	1.39	570	1955
400	37	0.66	65	60	1	1.10	1.30	1.44	615	2135
500	37	0.74	65	60	1/0	1.18	1.35	1.49	700	2545
600	61	0.81	80	60	1/0	1.28	1.45	1.59	780	2935
750	61	0.91	80	60	2/0	1.42	1.60	1.74	885	3570
1000*	61	1.12	80	60	2/0	1.63	1.84	1.98	1055	4560

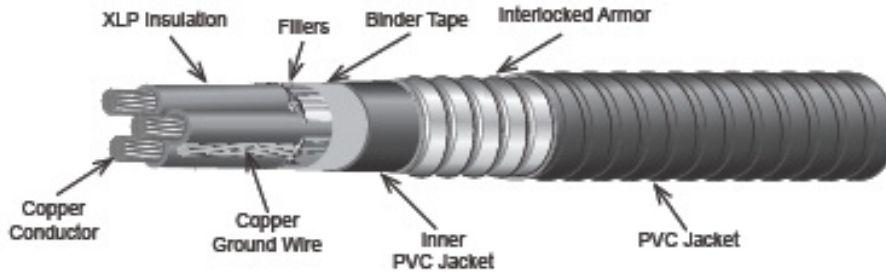
Note: \*\*Based on cables in free air run, per CEC Part 1, Table 1.  
For other installations refer to the CEC.  
\*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

## STANDARDS AND RATINGS:

1. Listed as TECK90 and Sunlight Resistant by CSA per C22.2 No. 131.
2. Listed as FT4 & HL by CSA per C22.2 No. 174.
3. Conforms to ICEA S-95-858/NEMA WC70 Nonshielded 0-2KV Cables as applicable.

## TECK90 (MINUS 40°C) HL CABLE, 600 VOLT, XLP (RW90)



90°C CONDUCTOR TEMPERATURE, WET OR DRY										
Conductor			Insulation in Mils	Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches			Ampacity** 30°C Ambient	Approximate Net Weight~ Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches				Over Inner Jacket	Over Armor	Over Overall Jacket		
<b>THREE CONDUCTOR 600 VOLT</b>										
8"	7	0.14	45	60	8	0.68	0.86	0.96	45	525
6"	7	0.18	45	60	8	0.75	0.94	1.05	65	695
4"	7	0.23	45	80	8	0.89	1.07	1.18	85	950
2	7	0.27	45	80	6	1.02	1.20	1.30	120	1290
1	19	0.30	55	80	6	1.15	1.33	1.43	140	1555
1/0	19	0.34	55	80	6	1.24	1.42	1.52	155	1820
2/0	19	0.38	55	80	6	1.33	1.51	1.63	185	2175
3/0	19	0.42	55	80	4	1.44	1.62	1.74	210	2630
4/0	19	0.48	55	80	4	1.56	1.91	2.03	235	3075
250	37	0.52	65	110	4	1.77	2.12	2.24	265	3835
300	37	0.57	65	110	4	1.88	2.23	2.35	295	445
350	37	0.62	65	110	3	1.99	2.34	2.49	325	5085
400	37	0.66	65	110	3	2.09	2.44	2.59	345	5650
500	37	0.74	65	110	2	2.26	2.61	2.76	395	6800
600	61	0.81	80	110	2	2.50	2.85	3.00	455	8030
750	61	0.91	80	110	2	2.72	3.07	3.24	500	9750
1000*	61	1.12	80	140	1	3.10	3.45	3.62	585	12710

Note:\*\*Based on cables in free air run, per CEC Part 1, Table 2. For other installations refer to the CEC.

~Weights based on aluminum armor assembly.

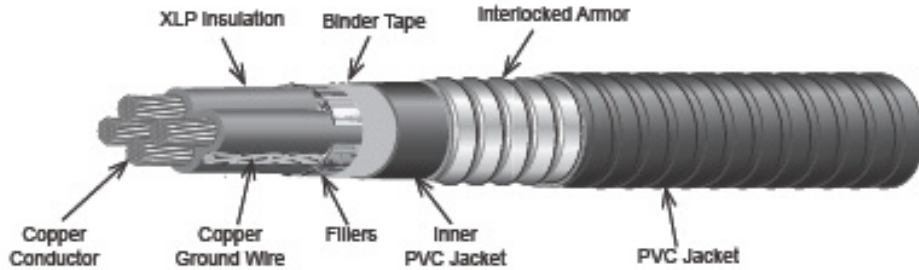
\*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

## STANDARDS AND RATINGS:

1. Listed as TECK90 and Sunlight Resistant by CSA per C22.2 No. 131.
2. Listed as FT4 & HL by CSA per C22.2 No. 174.
3. Conforms to ICEA S-95-858/NEMA WC70 Nonshielded 0-2KV Cables as applicable.

**TECK90 (MINUS 40°C) HL CABLE, 600 VOLT, XLP (RW90)**



90°C CONDUCTOR TEMPERATURE, WET OR DRY										
Conductor			Insulation in Mils	Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches			Ampacity** 30°C Ambient	Approximate Net Weight-Lbs/Kt
Size AWG or KCMIL	No. of Strands	Nominal O.D in Inches				Over Inner Jacket	Over Armor	Over Overall Jacket		
<b>FOUR CONDUCTOR 600 VOLT</b>										
8"	7	0.14	45	60	10	0.74	0.88	1.02	44	665
6"	7	0.18	45	60	8	0.83	1.00	1.14	60	900
4"	7	0.23	45	80	8	0.98	1.18	1.32	76	1230
2	7	0.27	45	80	6	1.09	1.25	1.39	104	1645
1	19	0.30	55	80	6	1.21	1.40	1.54	116	1980
1/0	19	0.34	55	80	6	1.30	1.45	1.59	136	2320
2/0	19	0.38	55	80	6	1.40	1.55	1.69	156	2745
3/0	19	0.42	55	80	4	1.51	1.71	1.85	180	3335
4/0	19	0.48	55	80	4	1.64	1.84	1.98	208	4075
250	37	0.52	65	110	4	1.83	2.03	2.17	232	4815
300	37	0.57	65	110	3	1.95	2.15	2.29	256	5570
350	37	0.62	65	110	3	2.07	2.28	2.46	280	6445
400	37	0.66	65	110	3	2.17	2.34	2.52	304	7175
500	37	0.74	65	110	2	2.36	2.53	2.71	344	8640
600	61	0.81	80	110	2	2.61	2.84	3.02	380	10310
750	61	0.91	80	140	2	2.90	3.09	3.31	428	12785
1000*	61	1.12	80	140	1	3.41	3.59	3.81	492	16640

Note:\*\*Based on cables in free air run, per CEC Part 1, Table 2. With all conductors considered current carrying, and the maximum ampacity is 80% of the table figures. For other installations refer to the CEC.

\*Weights based on aluminum armor assembly.  
\*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

**STANDARDS AND RATINGS:**

1. Listed as TECK90 and Sunlight Resistant by CSA per C22.2 No. 131.
2. Listed as FT4 & HL by CSA per C22.2 No. 174.
3. Conforms to ICEA S-95-858/NEMA WC70 Nonshielded 0-2KV Cables as applicable.

## TECK 90 (MINUS 40°C) 5000 VOLT, NON-SHIELDED, ARMORED POWER CABLE SINGLE AND MULTI-CONDUCTOR

### SCOPE:

This specification covers Aetna Insulated Wire's standard construction for single and multi-conductor TECK90 (-40°C) HL 5000V non-shielded armored power cables insulated with cross-linked polyethylene (XLP). The insulated conductors are cabled with a ground wire and the assembly covered with an inner polyvinyl chloride (PVC) jacket, encased in interlocked armor and with a final protective polyvinyl chloride (PVC) jacket overall or alternatively, an inner and outer jacket of low smoke halogen free (LSHF) polyolefin.

### PRODUCT SPECIFICATIONS AND RATINGS:

- a) Canadian Electrical Code (CEC), Part 1
- b) CSA C22.2 No. 131 Type Teck 90 Cable
- c) ICEAS-96-859/NEMA WC71 Nonshielded 2001V-5kV Cables
- d) CSA C22.2 No. 174 Cables and Cable Glands for Use in Hazardous Locations
- e) For ratings see the individual product specification sheets.

### APPLICATION:

All cables covered under this specification are suitable for a maximum of 5000V operation and at a maximum continuous conductor temperature of 90°C, an emergency overload temperature of 130°C and a short circuit condition of 250°C.

Type TECK90 cables are recognized by the CEC, Part 1, meet all the requirements therein and are certified to the relevant CSA standards. In addition the cables comply in all respects with the referenced ICEA standards. The cables are intended for use in industrial applications in power, lighting and control circuits in pulp and paper mills, mines and industrial plants. Teck cables are recommended for severe operating conditions, in wet and dry locations, installed in corrosive environments and are resistant to mechanical abuse and ozone attack. They may be installed in racks, trays, ladders and cable troughs. The cables have an FT-4 flame rating and are also rated for Hazardous Locations (HL).

### CONSTRUCTION DATA:

**Conductors** - The conductors consist of uncoated soft, copper strands meeting the requirements of ASTM B3. Unless otherwise specified the conductors are supplied as compact round per ASTM B496.

**Conductor Shield** - The conductor shielding consists of an extruded semi-conducting layer meeting the requirements of the governing specifications above.

**Insulation** - The insulation is cross-linked polyethylene (XLP) extruded concentrically over the conductor to the wall thickness as specified in the governing specifications listed.

**Conductor Coding** - Phase identification, where applicable, is provided by a printed color stripe on each insulated conductor (red, black, blue).

**Grounding Conductor** - In a single conductor cable the ground conductor is a serving of concentric uncoated bare copper wires applied helically over the insulated conductor. In multi-conductor assemblies, one stranded uncoated bare copper ground wire is located in one of the outer interstices.

**Assembly** - The assembly of multi-conductor cables is done by cabling together the required number of conductors and the ground wire with a left hand lay and a suitable filler to give the core a round cross section. A binder tape is applied.

**Inner Jacket** - Over the cable core an inner polyvinyl chloride (PVC) or low smoke halogen free (LSHF) polyolefin jacket is extruded.

**Armor** - Over jacketed core an interlocking armor of either aluminum or galvanized steel is applied per the governing specification.

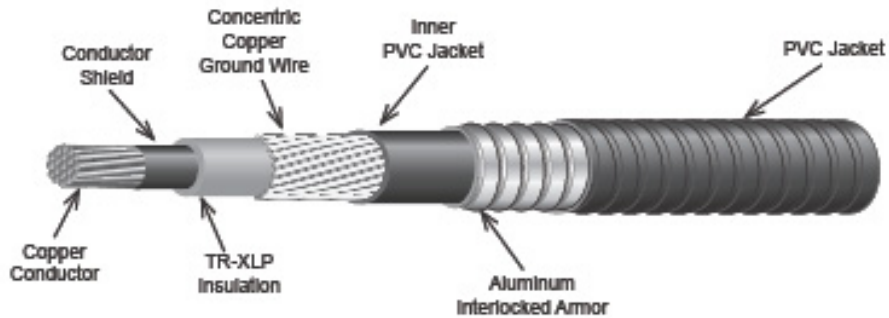
**Overall Jacket** - A protective sunlight and ozone resistant jacket of polyvinyl chloride (PVC) or low smoke halogen free (LSHF) polyolefin, suitable for installation in temperatures down to -40°C, is extruded for a tight fit over the interlocked armor.

### AVAILABLE OPTIONS:

- a) Custom ground configurations
- b) UL compliant for dual rating.



## TECK90 (MINUS 40°C) HL CABLE, 5000 VOLT XLP, NON-SHIELDED



90°C CONDUCTOR TEMPERATURE, WET OR DRY										
Conductor			Insulation in Mils	Inner Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches			Ampacity** 30°C Ambient	Approximate Net Weight Lbs/Kt
Size AWG or KCMIL	No. of Strands	Nominal O.D. in inches				Over Inner Jacket	Over Armor	Over Overall Jacket		
<b>SINGLE CONDUCTOR 5000 VOLT 100% OR 133% INSULATION LEVEL, NON-SHIELDED</b>										
2	7	0.27	90	45	6	0.79	0.95	1.09	190	730
1	19	0.30	90	45	4	0.82	1.00	1.14	220	845
1/0	19	0.34	90	45	4	0.86	1.05	1.19	260	970
2/0	19	0.38	90	45	4	0.90	1.10	1.24	300	1085
3/0	19	0.42	90	45	3	0.95	1.10	1.24	350	1255
4/0	19	0.48	90	60	3	1.00	1.18	1.32	405	1425
250	37	0.52	90	60	2	1.04	1.20	1.34	455	1610
350	37	0.62	90	60	1	1.17	1.35	1.49	570	2060
500	37	0.74	90	60	1/0	1.29	1.45	1.59	700	2660
750	61	0.91	90	60	2/0	1.51	1.71	1.85	885	3665
1000*	61	1.12	90	60	2/0	1.74	1.96	2.10	1055	4697

Note:\*\*Based on cables in free air run, per CEC Part 1, Table 1. For other installations refer to the CEC.

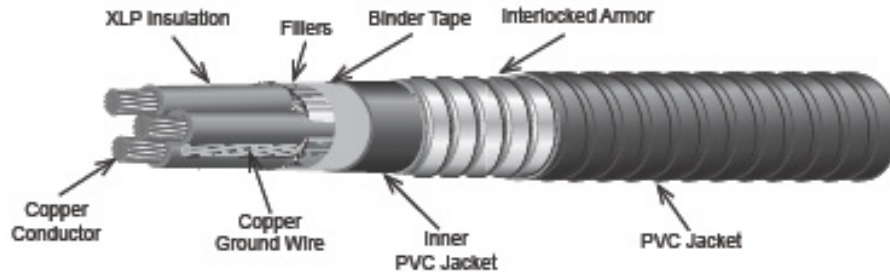
\*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

### STANDARDS AND RATINGS:

1. Listed as TECK90 and Sunlight Resistant by CSA per C22.2 No. 131.
2. Listed as FT4 & HL by CSA per C22.2 No. 174.
3. Conforms to ICEA S-98-859/NEMA WC71 Nonshielded 2001V-5KV Cables as applicable.

## TECK90 (MINUS 40°C) HL CABLE, 5000 VOLT XLP, NON-SHIELDED



90°C CONDUCTOR TEMPERATURE, WET OR DRY										
Conductor			Insulation in Mils	Inner Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches			Ampacity** 30°C Ambient	Approximate Net Weight- Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D. in Inches				Over Inner Jacket	Over Armor	Over Overall Jacket		
<b>THREE CONDUCTOR 5000 VOLT 100% OR 133% INSULATION LEVEL, NON-SHIELDED</b>										
8"	7	0.14	90	80	10	1.02	1.20	1.34	44	930
6"	7	0.18	90	80	8	1.10	1.25	1.39	60	1080
4"	7	0.23	90	80	8	1.20	1.40	1.54	76	1320
2	7	0.27	90	80	6	1.29	1.45	1.59	104	1660
1	19	0.30	90	80	6	1.36	1.55	1.69	116	1890
1/0	19	0.34	90	80	6	1.44	1.60	1.74	136	2160
2/0	19	0.38	90	80	6	1.53	1.71	1.85	156	2505
3/0	19	0.42	90	80	4	1.63	1.84	1.98	180	3065
4/0	19	0.48	90	80	4	1.74	1.96	2.10	208	3590
250	37	0.52	90	110	4	1.88	2.09	2.23	232	4140
350	37	0.62	90	110	3	2.08	2.28	2.46	260	5435
500	37	0.74	90	110	3	2.34	2.53	2.71	344	7145
750	61	0.91	90	110	2	2.72	2.90	3.08	428	9995
1000*	61	1.12	90	140	1	3.27	3.46	3.68	492	13425

Note:\*\*Based on cables in free air run, per CEC Part 1, Table 2. With all conductors considered current carrying, and the maximum ampacity is 80% of the table figures. For other installations refer to the CEC.

\*Weights based on aluminum armor assembly.

\*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

### STANDARDS AND RATINGS:

1. Listed as TECK90 and Sunlight Resistant by CSA per C22.2 No. 131.
2. Listed as FT4 & HL by CSA per C22.2 No. 174.
3. Conforms to ICEA S-98-859/NEMA WC71 Nonshielded 2001V-5KV Cables as applicable.

## TECK HIGH VOLTAGE (MINUS 40°C) HL ARMORED POWER CABLE, 5000 TO 35000 VOLT, SHIELDED CROSS-LINKED POLYETHYLENE INSULATION (XLP) SINGLE AND MULTI-CONDUCTOR

### SCOPE:

This specification covers Aetna Insulated Wire's standard construction for single and multi-conductor Teck Type (-40°C) HL 5000 - 35000V shielded armored power cables insulated with cross-linked polyethylene (XLP). The insulated conductors are cabled with a ground wire and the assembly covered with an inner polyvinyl chloride (PVC) jacket, encased in interlocked armor and with a final protective polyvinyl chloride (PVC) jacket overall or alternatively, an inner and outer jacket of low smoke halogen free (LSHF) polyolefin.

### PRODUCT SPECIFICATIONS AND RATINGS:

- Canadian Electrical Code (CEC), Part 1
- CSA C88.10 Standard for Shielded and Concentric Neutral Power Cables Rated 5-48 kV
- ICEAS-93-639/NEMA WC74, Shielded Power Cable 5-48 kV
- CSA C22.2 No. 174 Cables and Cable Glands for Use in Hazardous Locations
- For ratings see the individual product specification sheets.

### APPLICATION:

All cables covered under this specification are suitable for a maximum of 5000V to 35000V operation and at a maximum continuous conductor temperature of 90°C, an emergency overload temperature of 130°C and a short circuit condition of 250°C. Teck type cables are recognized by the CEC, Part 1, meet all the requirements therein and are certified to the relevant CSA standards. In addition the cables comply in all respects with the referenced ICEA standards. The cables are intended for use in industrial applications in power, lighting and control circuits in pulp and paper mills, mines and industrial plants. Teck cables are recommended for severe operating conditions, in wet and dry locations, installed in corrosive environments and are resistant to mechanical abuse and ozone attack. They may be installed in racks, trays, ladders and cable troughs. The cables have an FT-4 flame rating and are also rated for Hazardous Locations (HL).

### CONSTRUCTION DATA AND SPECIFICATIONS:

**Conductors** - The conductor consists of uncoated soft, copper strands meeting the requirements of ASTM B3. Unless otherwise specified the conductors are supplied as compact round per ASTM B496.

**Conductor Shield** - The conductor shielding consists of an extruded semi-conducting layer meeting the requirements of the governing specifications above.

**Insulation** - The insulation is cross-linked polyethylene (XLP) extruded concentrically over the conductor to the wall thickness as specified in the governing specifications listed and as shown on the individual product specification sheets. Standard insulation offering is tree retardant cross-linked polyethylene (TR-XLP).

**Insulation Shielding** - Insulation shielding is made up of a non-metallic component of semi-conducting extruded compound applied directly over, and in intimate contact with, the insulation. Over the semi-conducting, a metallic component of 5mil bare copper tape, overlapped a minimum of 12 1/2%, is applied.

**Conductor Coding** - Phase identification is provided by a printed color stripe on each insulated conductor (red, black, blue).

**Grounding Conductor** - In a single conductor cable the ground conductor is a serving of concentric uncoated bare copper wires applied helically over the copper tape shield. In multi conductor assemblies, one stranded uncoated bare copper ground wire will be located in one of the outer interstices.

**Assembly** - Conductors and ground wire are cabled together with a left hand lay and suitable fillers to make the cable round. A binder tape is applied.

**Inner Jacket** - Over the cable core an inner polyvinyl chloride (PVC) or low smoke halogen free (LSHF) polyolefin jacket is extruded.

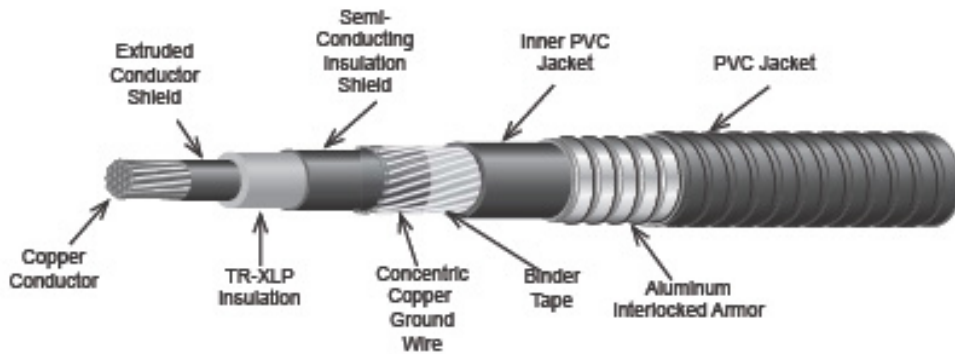
**Armor** - Over jacketed core an interlocking armor of either aluminum or galvanized steel is applied per the governing specification.

**Overall Jacket** - A protective sunlight and ozone resistant jacket of polyvinyl chloride (PVC) or low smoke halogen free (LSHF) polyolefin, suitable for installation in temperatures down to -40°C, is extruded for a tight fit over the interlocked armor.

### AVAILABLE OPTIONS:

- Custom ground configurations
- UL compliant for Dual Rating

## TECK HIGH VOLTAGE (MINUS 40°C) HL ARMORED POWER CABLE, 5000 VOLT TR-XLP, SHIELDED



90°C CONDUCTOR TEMPERATURE, WET OR DRY										
Conductor			Insulation in Mils	Inner Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches			Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D. in Inches				Over Inner Jacket	Over Armor	Over Overall Jacket		
<b>SINGLE CONDUCTOR 5000 VOLT 100% OR 133% INSULATION LEVEL, SHIELDED</b>										
2	7	0.27	90	60	6	0.87	1.05	1.19	190	840
1	19	0.30	90	60	4	0.90	1.10	1.24	225	955
1/0	19	0.34	90	80	4	0.98	1.18	1.32	260	1100
2/0	19	0.38	90	80	4	1.02	1.20	1.34	300	1215
3/0	19	0.42	90	80	3	1.07	1.25	1.39	345	1395
4/0	19	0.48	90	80	3	1.12	1.30	1.44	400	1570
250	37	0.52	90	80	2	1.16	1.35	1.49	445	1760
350	37	0.62	90	80	1	1.29	1.45	1.59	550	2215
500	37	0.74	90	80	1/0	1.41	1.60	1.74	695	2835
750	61	0.91	90	80	2/0	1.66	1.71	1.85	900	3965
1000*	61	1.12	90	110	2/0	1.95	2.15	2.29	1075	5100

Note: \*\*Based on single cable isolated in air. For other installations refer to the CEC.

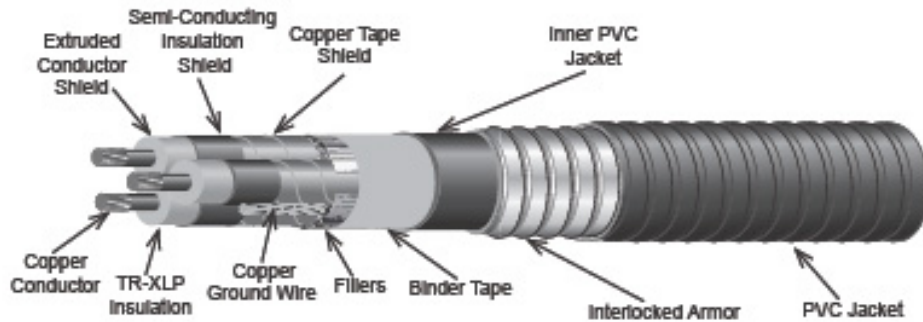
\*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

### STANDARDS AND RATINGS:

1. Listed as Type Power Cable and Sunlight Resistant by CSA per C68.10.
2. Listed as FT4 & HL by CSA per C22.2 No. 174.
3. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cables 5 - 48KV.

## TECK HIGH VOLTAGE (MINUS 40°C) HL ARMORED POWER CABLE, 5000 VOLT TR-XLP, SHIELDED



90°C CONDUCTOR TEMPERATURE, WET OR DRY									
Conductor			Insulation In Mils	Jacket In Mils	Size AWG Copper Ground Wire	Approximate O.D. In Inches		Ampacity** 40°C Ambient	Approximate Net Weight~ Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D. In Inches				Over Armor	Over Overall Jacket		
THREE CONDUCTOR 5000 VOLT 100% OR 133% INSULATION LEVEL, SHIELDED									
8"	7	0.14	90	80	10	1.40	1.54	59	1230
6"	7	0.18	90	80	8	1.45	1.59	79	1395
4"	7	0.23	90	80	8	1.55	1.69	105	1650
2	7	0.27	90	80	6	1.65	1.79	140	2015
1	19	0.30	90	80	6	1.78	1.92	160	2260
1/0	19	0.34	90	80	6	1.84	1.98	185	2550
2/0	19	0.38	90	80	6	1.90	2.04	215	2995
3/0	19	0.42	90	80	4	2.03	2.17	250	3495
4/0	19	0.48	90	110	4	2.15	2.29	285	4130
250	37	0.52	90	110	4	2.28	2.46	320	4715
350	37	0.62	90	110	3	2.46	2.64	395	5965
500	37	0.74	90	110	3	2.71	2.89	485	7730
750	61	0.91	90	140	2	3.15	3.37	615	10980
1000*	61	1.12	90	140	1	3.65	3.87	705	14205

Note: \*\*Based on single cable. Isolated in air. For other installations refer to the CEC.

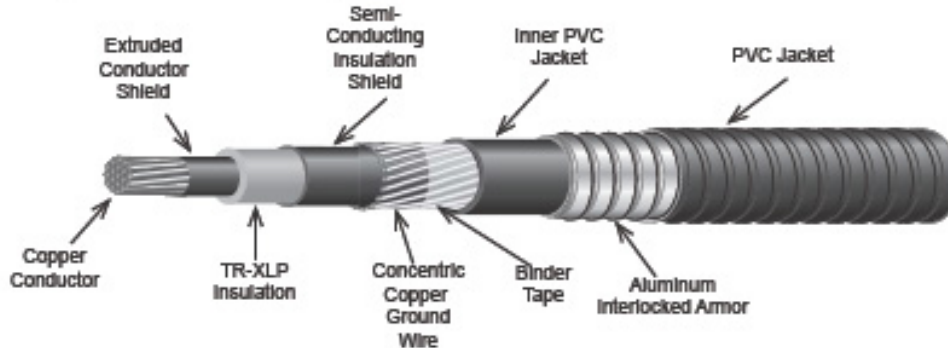
~Weights based on aluminum armor assembly.  
\*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

### STANDARDS AND RATINGS:

1. Listed as Type Power Cable and Sunlight Resistant by CSA per 68.10.
2. Listed as FT4 & HL by CSA per C22.2 No. 174 & C22.2 No. 3.
3. Conforms to ICEA S-93-839/NEMA WC74 Shielded Power Cables 5 - 48KV.

**TECK HIGH VOLTAGE (MINUS 40°C) HL ARMORED POWER CABLE, 8000 VOLT TR-XLP, SHIELDED**



90°C CONDUCTOR TEMPERATURE, WET OR DRY										
Conductor			Insulation in Mils	Inner Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches			Amacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D. in Inches				Over Inner Jacket	Over Armor	Over Overall Jacket		
<b>SINGLE CONDUCTOR 8000 VOLT 100% INSULATION LEVEL, SHIELDED</b>										
6"	7	0.18	115	60	8	0.83	1.01	1.11	110	610
4"	7	0.23	115	60	6	0.91	1.09	1.19	150	770
2	7	0.27	115	80	6	0.96	1.15	1.29	195	935
1	19	0.30	115	80	4	0.99	1.18	1.32	225	1050
1/0	19	0.34	115	80	4	1.03	1.20	1.34	260	1145
2/0	19	0.38	115	80	4	1.07	1.25	1.39	300	1265
3/0	19	0.42	115	80	3	1.12	1.30	1.44	345	1445
4/0	19	0.48	115	80	3	1.17	1.35	1.49	400	1620
250	37	0.52	115	80	2	1.21	1.40	1.54	445	1815
350	37	0.62	115	80	1	1.34	1.50	1.64	550	2275
500	37	0.74	115	80	1/0	1.49	1.71	1.85	685	2940
750	61	0.91	115	80	2/0	1.71	1.71	1.85	885	4030
1000*	61	1.12	115	110	2/0	2.00	2.21	2.35	1060	5180
<b>SINGLE CONDUCTOR 8000 VOLT 133% INSULATION LEVEL, SHIELDED</b>										
6"	7	0.18	140	60	8	0.92	1.10	1.20	110	695
4"	7	0.23	140	60	6	0.96	1.14	1.24	150	805
2	7	0.27	140	80	6	1.01	1.20	1.34	195	985
1	19	0.30	140	80	4	1.04	1.20	1.34	225	1095
1/0	19	0.34	140	80	4	1.08	1.25	1.39	260	1195
2/0	19	0.38	140	80	4	1.12	1.30	1.44	300	1315
3/0	19	0.42	140	80	3	1.17	1.35	1.49	345	1500
4/0	19	0.48	140	80	3	1.22	1.40	1.54	400	1675
250	37	0.52	140	80	2	1.26	1.45	1.59	445	1870
350	37	0.62	140	80	1	1.39	1.55	1.69	550	2330
500	37	0.74	140	80	1/0	1.54	1.71	1.85	685	3000
750	61	0.91	140	80	2/0	1.76	1.71	1.85	885	4095
1000*	61	1.12	140	110	2/0	2.05	2.28	2.46	1060	5360

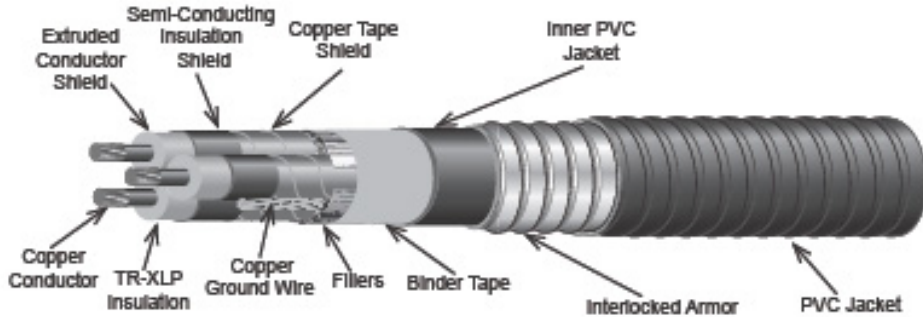
Note: \*\*Based on single cable isolated in air. For other installations refer to the CEC.  
\*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

**STANDARDS AND RATINGS:**

1. Listed as Type Power Cable and Sunlight Resistant by CSA per C68.10.
2. Listed as FT4 & HL by CSA per C22.2 No. 174.
3. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cables 5 - 48KV.

**TECK HIGH VOLTAGE (MINUS 40°C) HL ARMORED POWER CABLE 8000 VOLT TR-XLP, SHIELDED**



90°C CONDUCTOR TEMPERATURE, WET OR DRY									
Conductor			Insulation in Mils	Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches		Ampacity** 40°C Ambient	Approximate Net Weight~ Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D. in Inches				Over Armor	Over Overall Jacket		
<b>THREE CONDUCTOR 8000 VOLT 100% INSULATION LEVEL, SHIELDED</b>									
6"	7	0.18	115	80	8	1.55	1.69	93	1525
4"	7	0.23	115	80	8	1.71	1.85	120	1795
2	7	0.27	115	80	6	1.78	1.92	165	2160
1	19	0.30	115	80	6	1.84	1.98	185	2400
1/0	19	0.34	115	80	6	1.96	2.10	215	2795
2/0	19	0.38	115	80	6	2.03	2.17	245	3160
3/0	19	0.42	115	110	4	2.15	2.29	285	3750
4/0	19	0.48	115	110	4	2.28	2.46	325	4410
250	37	0.52	115	110	4	2.40	2.58	360	4910
350	37	0.62	115	110	3	2.59	2.77	435	6165
500	37	0.74	115	110	2	2.84	3.02	535	7950
750	61	0.91	115	140	2	3.28	3.50	670	11230
1000*	61	1.12	115	140	1	3.78	4.00	770	14485
<b>THREE CONDUCTOR 8000 VOLT 133% INSULATION LEVEL, SHIELDED</b>									
6"	7	0.18	140	80	8	1.71	1.85	93	1675
4"	7	0.23	140	80	8	1.78	1.92	120	1935
2	7	0.27	140	80	6	1.90	2.04	165	2400
1	19	0.30	140	80	6	1.96	2.10	185	2650
1/0	19	0.34	140	110	6	2.09	2.23	215	3045
2/0	19	0.38	140	110	6	2.15	2.29	245	3415
3/0	19	0.42	140	110	4	2.28	2.46	285	4030
4/0	19	0.48	140	110	4	2.40	2.58	325	4600
250	37	0.52	140	110	4	2.46	2.64	360	5095
350	37	0.62	140	110	3	2.71	2.89	435	6375
500	37	0.74	140	110	3	2.96	3.14	535	8170
750	61	0.91	140	140	2	3.40	3.62	670	11490
1000*	61	1.12	140	140	1	3.90	4.12	770	14770

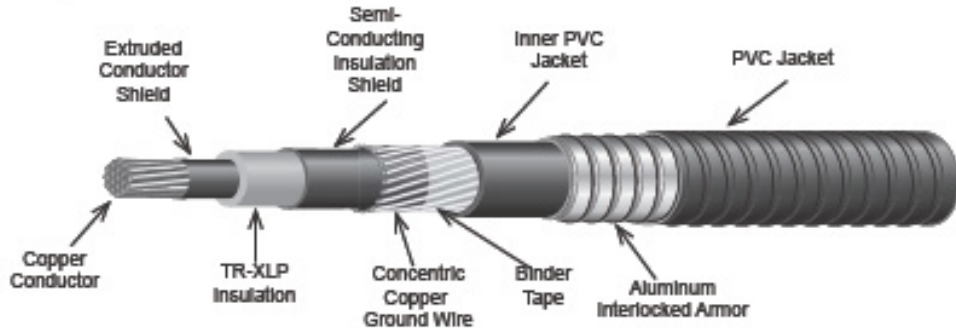
Note: \*\*Based on single cable isolated in air. For other installations refer to the CEC. ~Weights based on aluminum armor assembly.  
\*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

**STANDARDS AND RATINGS:**

1. Listed as Type Power Cable and Sunlight Resistant by CSA per C68.10.
2. Listed as FT4 & HL by CSA per C22.2 No. 174.
3. Conforms to ICEA S-93-839/NEMA WC74 Shielded Power Cables 5 - 48KV.

**TECK HIGH VOLTAGE (MINUS 40°C) HL ARMORED POWER CABLE, 15000 VOLT TR-XLP, SHIELDED**



90°C CONDUCTOR TEMPERATURE, WET OR DRY										
Conductor			Insulation in Mils	Inner Jacket in Mils	Size AWG Copper Ground Wire	Approximate O.D. in Inches			Ampacity** 40°C Ambient	Approximate Net Weight Lbs/100'
Size AWG or KCMIL	No. of Strands	Nominal O.D. in Inches				Over Inner Jacket	Over Armor	Over Overall Jacket		
<b>SINGLE CONDUCTOR 15000 VOLT 100% INSULATION LEVEL, SHIELDED</b>										
2	7	0.27	175	80	6	1.08	1.25	1.39	195	1050
1	19	0.30	175	80	4	1.11	1.30	1.44	225	1170
1/0	19	0.34	175	80	4	1.15	1.35	1.49	260	1275
2/0	19	0.38	175	80	4	1.19	1.35	1.49	300	1385
3/0	19	0.42	175	80	3	1.24	1.40	1.54	345	1570
4/0	19	0.48	175	80	3	1.29	1.45	1.59	400	1750
250	37	0.52	175	80	2	1.33	1.50	1.64	445	1950
350	37	0.62	175	80	1	1.49	1.71	1.85	550	2470
500	37	0.74	175	80	1/0	1.61	1.71	1.85	685	3165
750	61	0.91	175	110	2/0	1.89	2.09	2.23	885	4360
1000*	61	1.12	175	110	2/0	2.15	2.34	2.52	1060	5535
<b>SINGLE CONDUCTOR 15000 VOLT 133% INSULATION LEVEL, SHIELDED</b>										
2	7	0.27	220	80	6	1.17	1.35	1.49	195	1145
1	19	0.30	220	80	4	1.20	1.40	1.54	225	1270
1/0	19	0.34	220	80	4	1.24	1.40	1.54	260	1365
2/0	19	0.38	220	80	4	1.28	1.45	1.59	300	1490
3/0	19	0.42	220	80	3	1.33	1.50	1.64	345	1675
4/0	19	0.48	220	80	3	1.38	1.55	1.69	400	1860
250	37	0.52	220	80	2	1.45	1.65	1.79	445	2105
350	37	0.62	220	80	1	1.58	1.71	1.85	550	2570
500	37	0.74	220	80	1/0	1.70	1.71	1.85	685	3280
750	61	0.91	220	110	2/0	1.98	2.15	2.29	885	4500
1000*	61	1.12	220	110	2/0	2.24	2.46	2.64	1060	5700

Note: \*\*Based on single cable isolated in air. For other installations refer to the CEC.

\*Compressed conductors.

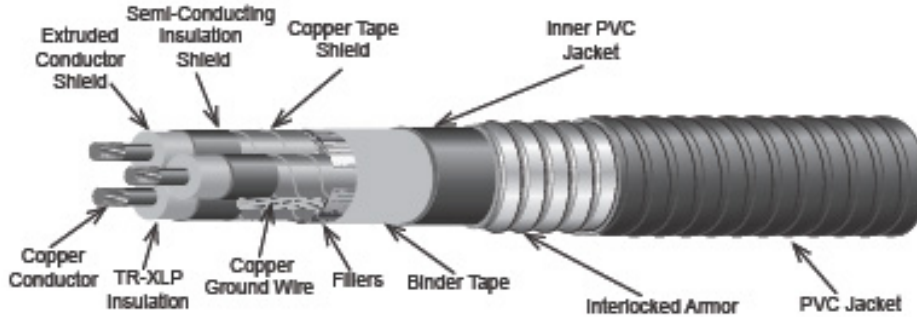
The above data is approximate and subject to normal manufacturing tolerances.

**STANDARDS AND RATINGS:**

1. Listed as Type Power Cable and Sunlight Resistant by CSA per C88.10.
2. Listed as FT4 & HL by CSA per C22.2 No. 174.
3. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cables 5 - 48KV.



**TECK HIGH VOLTAGE (MINUS 40°C) HL ARMORED POWER CABLE 15000 VOLT TR-XLP, SHIELDED**



90°C CONDUCTOR TEMPERATURE, WET OR DRY									
Conductor			Insulation In Mils	Jacket In Mils	Size AWG Copper Ground Wire	Approximate O.D. In Inches		Ampacity** 40°C Ambient	Approximate Net Weight~ Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D. In Inches				Over Armor	Over Overall Jacket		
<b>THREE CONDUCTOR 15000 VOLT 100% INSULATION LEVEL, SHIELDED</b>									
2	7	0.27	175	110	6	2.09	2.23	165	2715
1	19	0.30	175	110	6	2.15	2.29	185	2971
1/0	19	0.34	175	110	6	2.21	2.35	215	3285
2/0	19	0.38	175	110	6	2.34	2.52	245	3775
3/0	19	0.42	175	110	4	2.40	2.58	285	4290
4/0	19	0.48	175	110	4	2.53	2.71	325	4870
250	37	0.52	175	110	4	2.65	2.83	360	5380
350	37	0.62	175	110	3	2.84	3.02	435	6670
500	37	0.74	175	140	3	3.15	3.31	535	8815
750	61	0.91	175	140	2	3.53	3.75	670	11845
1000*	61	1.12	175	140	1	4.03	4.25	770	15165
<b>THREE CONDUCTOR 15000 VOLT 133% INSULATION LEVEL, SHIELDED</b>									
2	7	0.27	220	110	6	2.28	2.46	165	3130
1	19	0.30	220	110	6	2.34	2.52	185	3395
1/0	19	0.34	220	110	6	2.40	2.58	215	3720
2/0	19	0.38	220	110	6	2.53	2.71	245	4120
3/0	19	0.42	220	110	4	2.59	2.77	285	4650
4/0	19	0.48	220	110	4	2.71	2.89	325	5240
250	37	0.52	220	110	4	2.84	3.02	360	5765
350	37	0.62	220	110	3	3.03	3.25	435	7200
500	37	0.74	220	140	3	3.34	3.56	535	9260
750	61	0.91	220	140	2	3.71	3.93	670	12330

Note: \*\*Based on single cable isolated in air. For other installations refer to the CEC.

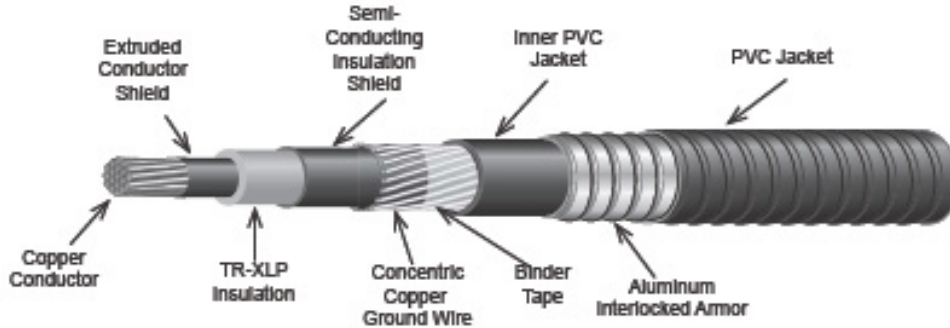
~Weights based on aluminum armor assembly.  
\*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

**STANDARDS AND RATINGS:**

1. Listed as Type Power Cable and Sunlight Resistant by CSA per C68.10.
2. Listed as FT4 & HL by CSA per C22.2 No. 174.
3. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cables 5 - 48KV.

**TECK HIGH VOLTAGE (MINUS 40°C) HL ARMORED POWER CABLE, 25000 VOLT TR-XLP, SHIELDED**



90°C CONDUCTOR TEMPERATURE, WET OR DRY										
Conductor			Insulation In Mils	Inner Jacket In Mils	Size AWG Copper Ground Wire	Approximate O.D. In Inches			Ampacity** 40°C Ambient	Approximate Net Weight Lbs/Kft
Size AWG or KCML	No. of Strands	Nominal O.D. In Inches				Over Inner Jacket	Over Armor	Over Overall Jacket		
<b>SINGLE CONDUCTOR 25000 VOLT 100% INSULATION LEVEL, SHIELDED</b>										
1	19	0.30	260	80	4	1.26	1.45	1.59	225	1335
1/0	19	0.34	260	80	4	1.30	1.50	1.64	260	1440
2/0	19	0.38	260	80	4	1.34	1.50	1.64	300	1555
3/0	19	0.42	260	80	3	1.39	1.55	1.69	345	1745
4/0	19	0.48	260	80	3	1.47	1.65	1.79	395	1975
250	37	0.52	260	80	2	1.51	1.71	1.85	440	2180
350	37	0.62	260	80	1	1.64	1.71	1.85	545	2730
500	37	0.74	260	110	1/0	1.82	2.03	2.17	680	3520
750	61	0.91	260	110	2/0	2.04	2.21	2.38	870	4595
1000*	61	1.12	260	110	2/0	2.30	2.53	2.71	1040	5810
<b>SINGLE CONDUCTOR 25000 VOLT 133% INSULATION LEVEL, SHIELDED</b>										
1	19	0.30	320	80	4	1.39	1.55	1.69	225	1480
1/0	19	0.34	320	80	4	1.46	1.65	1.79	260	1635
2/0	19	0.38	320	80	4	1.50	1.71	1.85	300	1765
3/0	19	0.42	320	80	3	1.55	1.71	1.85	345	1955
4/0	19	0.48	320	80	3	1.60	1.71	1.85	395	2135
250	37	0.52	320	80	2	1.64	1.71	1.85	440	2420
350	37	0.62	320	80	1	1.77	1.71	1.85	545	2900
500	37	0.74	320	110	1/0	1.95	2.15	2.29	680	3725
750	61	0.91	320	110	2/0	2.20	2.40	2.58	870	4980
1000*	61	1.12	320	110	2/0	2.43	2.65	2.83	1040	6055

Note: \*\*Based on single cable isolated in air. For other installations refer to the CEC.  
\*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

**STANDARDS AND RATINGS:**

1. Listed as Type Power Cable and Sunlight Resistant by CSA per C88.10.
2. Listed as FT4 & HL by CSA per C22.2 No. 174.
3. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cables 5 - 48KV.



## NOTES

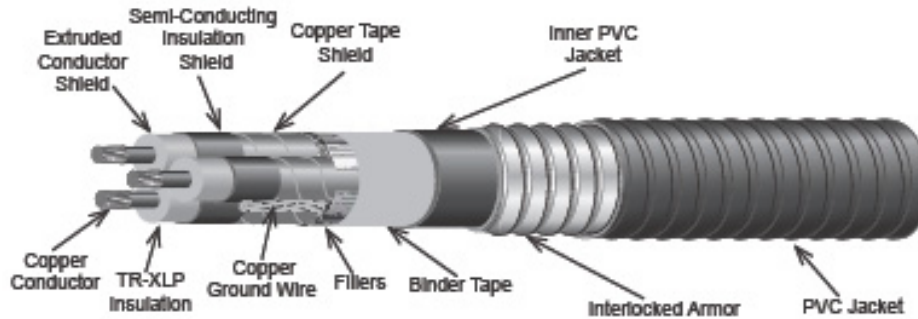


## NOTES



## NOTES

**TECK HIGH VOLTAGE (MINUS 40°C) HL ARMORED POWER CABLE, 25000 VOLT TR-XLP, SHIELDED**



90°C CONDUCTOR TEMPERATURE, WET OR DRY									
Conductor			Insulation In MILs	Jacket In MILs	Size AWG Copper Ground Wire	Approximate O.D. in Inches		Ampacity** 40°C Ambient	Approximate Net Weight- Lbs/Kft
Size AWG or KCMIL	No. of Strands	Nominal O.D. In inches				Over Armor	Over Overall Jacket		
<b>THREE CONDUCTOR 25000 VOLT 100% INSULATION LEVEL, SHIELDED</b>									
1	19	0.30	260	110	6	2.46	2.64	185	3625
1/0	19	0.34	260	110	6	2.59	2.77	215	3970
2/0	19	0.38	260	110	6	2.65	2.83	245	4365
3/0	19	0.42	260	110	4	2.78	2.96	285	4910
4/0	19	0.48	260	110	4	2.84	3.02	325	5500
250	37	0.52	260	110	4	2.96	3.14	360	6025
350	37	0.62	260	140	3	3.21	3.43	435	7685
500	37	0.74	260	140	3	3.46	3.68	535	9570
750	61	0.91	260	140	2	3.84	4.06	670	12660
<b>THREE CONDUCTOR 25000 VOLT 133% INSULATION LEVEL, SHIELDED</b>									
1	19	0.30	320	110	6	2.78	2.96	185	4170
1/0	19	0.34	320	110	6	2.84	3.02	215	4510
2/0	19	0.38	320	110	6	2.90	3.08	245	4920
3/0	19	0.42	320	110	4	3.03	3.25	285	5605
4/0	19	0.48	320	140	4	3.21	3.43	325	6430
250	37	0.52	320	140	4	3.28	3.50	360	6965
350	37	0.62	320	140	3	3.53	3.75	435	8355
500	37	0.74	320	140	3	3.78	4.00	535	10275

Note: \*\*Based on single cable. Isolated in air. For other installations refer to the CEC.  
 ~Weights based on aluminum armor assembly.  
 \*Compressed conductors.

The above data is approximate and subject to normal manufacturing tolerances.

**STANDARDS AND RATINGS:**

1. Listed as Type Power Cable and Sunlight Resistant by CSA per C68.10.
2. Listed as FT4 & HL by CSA per C22.2 No. 174.
3. Conforms to ICEA S-93-639/NEMA WC74 Shielded Power Cables 5 - 48KV.

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