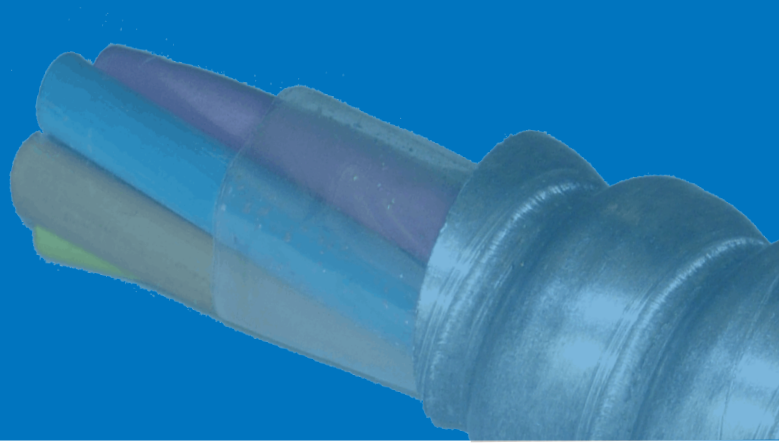
ARMORED CABLE

Let Omni Cable be an extension of your warehouse. We have a wide range of armored cable products ready to be shipped to your customers today.

Omni Cable, finding the right product, length, and total solution for you and your customers.



Product Overview

For harsh industrial conditions, using the wrong cable can be extremely costly. For some industrial processes, downtime can cost thousands of dollars every minute. There is one simple and easy solution to provide the safety, dependability and reliability to your industrial process, and that is armor. Armored cable provides extreme durability without forfeiting conductivity, and there are armored cables for every situation.

Types of Armored Cable

Aluminum Interlock Armor
Continuously Corrugated Wield (CCW)
TECK 90

Applications

Industrial conditions and harsh environments

Where to Find Jobs & Why to Sell

WHERE can you find armored cable jobs?
Harsh industrial conditions.

WHY sell these cables?
The above are typically large projects and provide an excellent opportunity for pull-through business because these cables are installed in the early phases of a project.

CONSTRUCTION

Conductor
- Size/gauge - varies
- Stranded bare copper

Shielding
- Shielded or non-shielded

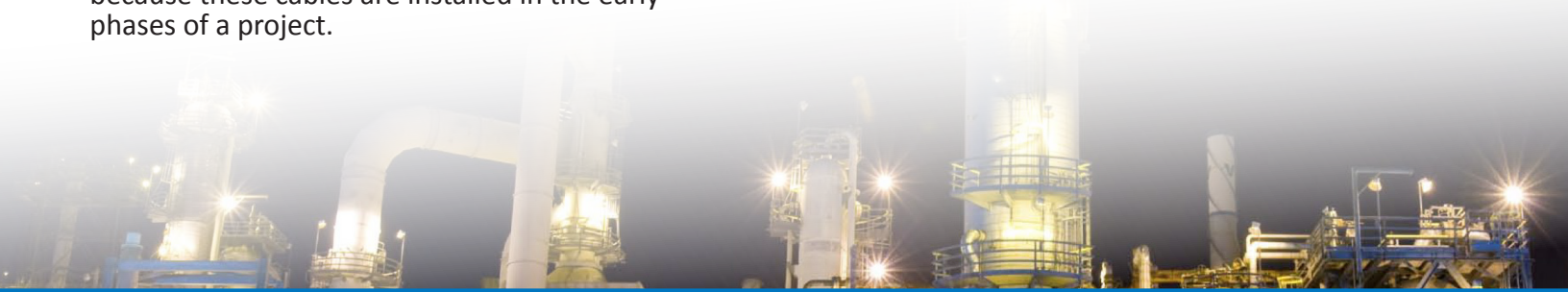
Insulation
- Polyvinyl Chloride (PVC)
- Cross-Linked Polyethylene (XLPE)
- Ethylene Propylene Rubber (EPR)

Jacket
- Sunlight Resistant Polyvinyl Chloride (PVC)

Voltage
- 600V, 2.4kV, 5kV/8kV, 15kV

How Omni Cable Can Help You!

- We cut custom lengths, stock many variations, offer custom packaging, and help with project management.
- We provide printable armored cable spec sheets on our website.
- We provide training and education on armored cables.



For more information, please contact your Omni Cable Account Manager.
Atlanta • Boston • Charlotte • Chicago • Denver • Houston • Los Angeles • Philadelphia • San Francisco • Seattle • St. Louis • Tampa

ARMORED CABLE

OMNICABLE

(800) 292-OMNI

omnicable.com

ARMORED CABLE

Using the proper armored cable in a harsh environment is critical to maximize productivity, avoid the cost of repairs and replacements, and most importantly, eliminate possible downtime. Downtime can cost a company thousands of dollars every minute. It is important to be informed of the variations of armored cable and in which scenario they should be used.

For example, cables that feed into mines are put under the most extreme conditions. These cables can be buried in rocky soil, placed in high foot-traffic areas, run over by vehicles and machinery, and are sometimes even used as a walking path for electricians and mineworkers. These harsh conditions can tear or puncture a conductors insulation, and lead to catastrophic results. If not protected from these conditions, the reliability of your cable may be sacrificed.

There is one simple and easy solution to provide safety, dependability and reliability to your industrial process, and that is armor. Armored cable provides extreme durability without forfeiting conductivity, and there are armored cables for every situation.

There are three major types of armored cable:

Aluminum Interlocked Armor

Continuously Corrugated Weld

TECK 90

ARMORED CABLE SELECTION GUIDE

		Voltage						Insulation				Temp.							
		300 Volt	600 Volt	1000 Volt	2.4 kV	5 kV	15 kV	PVC	EPR	XLPE	TFN	90°C	105°C	Shielded	Grounded	Direct Burial	Fittings Available	PVC Jacket	UL Listed
Aluminum Interlocked Armor	600 Volt - Type MC - 3 conductor		X							X		X			X	X	X	X	X
	600 Volt - Type MC - 4 conductor		X							X		X			X	X	X	X	X
	600 Volt - Type MC - 14 AWG Multi-conductor		X							X		X			X	X	X	X	X
	2.4kV - Type MV-90 - EPR Insulation - Non-Shielded				X				X			X		X	X	X		X	X
	5kV - Type MV-105 - EPR Insulation - Shielded					X			X				X	X	X	X	X	X	X
	15kV - Type MV-105 - EPR Insulation - Shielded						X		X				X	X		X	X	X	X
Continuously Corrugated Weld	300 Volt Type PLTC/ITC - Instrumentation	X						X					X	X		X	X	X	X
	600 Volt Type MC-HL - Instrumentation		X								X	X		X		X	X	X	X
	600 Volt - Type MC-HL		X								X	X				X	X	X	X
	600 Volt - Type MC-HL with Ground		X								X	X				X	X	X	X
	5kV - Type MC-HL - EPR Insulation - Nonshielded					X			X			X		X	X	X	X	X	X
	5kV - Type MC-HL/MV105 - EPR Insulation - Shielded					X			X				X	X	X	X	X	X	X
	15kV - Type MC-HL/MV105 - EPR Insulation - Shielded						X		X				X	X	X	X	X	X	X
TECK 90	TECK 90 - Multiconductor with Ground - 1kV, 600 Volt		X	X						X		X			X	X	X	X	
	600 Volt - 16 AWG Pairs/Triads - Overall shield		X							X		X		X	X	X	X	X	X
	600 Volt - 16 AWG Pairs - Individual & Overall shield		X							X		X		X	X	X	X	X	X

Hazardous Location Classification

	Class I		Class II		Class III		
	Division 1	Division 2	Division 1	Division 2	Division 1	Division 2	CSA C22.2 No.131
Aluminum Interlocked Armor		X		X	X	X	
Continuously Corrugated Weld	X	X	X	X	X	X	
TECK 90							X

Aluminum Interlocked Armor

Interlocked armor is composed of a metal strip that is wrapped in a spiral around the cable. This armored strip is shaped similar to an S, so that it overlaps itself when spirally wrapped around the cable. It is wrapped relatively loose, so that the cable can maintain flexibility.

Interlocked armor eliminates the need for any conduit or ductwork, and is best suited for plenum areas or riser shafts. Aluminum Interlocked Armor is loosely fitted making it the easiest armored cable to install, due to its increased flexibility.

Markets:
- Pulp & paper mills
- Mines
- Industrial plants

Available in 600 Volt, 2.4 kV, 5 kV, 15 kV, and 25 kV

	UL 1569	UL 1072	UL 44	UL 1581	UL 66, Type XLPE/VW-1	UL Type MC - 600V	ICEA S-93-639/NEMA WC 74	ICEA S-95-658/NEMA WC 70	ICEA S-96-659/NEMA WC 71	ICEA T-29-520 (210,000 BTU/hr)	IEEE 1202 (70,000BTU/hr)/CSA FT4	AEIC CS-8	NFPA 70 (National Electric Code)	RoHS	NEC Type MC
600 Volt - Type MC - 3 conductor	X		X					X		X	X				
600 Volt - Type MC - 4 conductor	X		X					X		X	X				
600 Volt - Type MC - 14, 12 & 10 AWG Multi-conductor	X		X	X				X		X	X				
2.4kV - Type MV-105 - EPR Insulation - Non-Shielded		X							X	X	X			X	
5kV - Type MV-105 - EPR Insulation - Shielded		X					X			X	X	X		X	
15kV - Type MV-105 - EPR Insulation - Shielded		X					X			X	X	X	X		

CCW - Continuous Corrugated Weld

Continuously Corrugated Weld is similar to aluminum interlocked armor, in that it is composed of an aluminum strip. The width of the armor strip matches the circumference of the cable, which is then wrapped around the cable and welded together. The aluminum strip is then corrugated to increase the strength of the armor. This makes CCW impervious to moisture, liquids and gasses.

CCW provides a more effective barrier against a harsh environment that may reduce the cable life. It is also an effective shield against electromagnetic fields, which can be very important in some industrial applications, but possibly the most important purpose of CCW is its use in hazardous locations that require the cable to be impervious to gas, liquids and vapors that are terminated with explosion proof glands to electrical equipment.

Markets:
- Offshore production platforms
- Refineries
- Natural gas facilities
- Petrochemical processing mills

Available in 300 Volt, 600 Volt, 2.4 kV, 5 kV, 15 kV

	UL 13	UL 2250	UL 1569	UL 1072	UL 1309	UL 66	UL 44	UL 2225 for Hazardous Locations	ICEA T-29-520 (210,000 BTU/hr)	ICEA S-93-639 (NEMA WC 74)	ICEA S-96-659	IEEE 1202	CSA C22.2 No.123 & 239	Type MC per NEC Article 330	RoHS
300 Volt Type PLTC/ITC - Instrumentation	X	X													
600 Volt Type MC-HL - Instrumentation			X			X		X						X	
600 Volt - Type MC-HL			X				X	X	X			X		X	
600 Volt - Type MC-HL with Ground			X		X			X	X				X		X
2.4 kV - Type MC-HL - EPR Insulation - Shielded				X	X				X		X	X			
5kV - Type MC-HL/MV105 - EPR Insulation - Shielded				X	X			X	X	X		X			
15kV - Type MC-HL/MV105 - EPR Insulation - Shielded				X	X			X	X	X		X			

TECK 90

TECK 90 Armored Cable originated in Canada, but is now a popular product all over the world. TECK 90 is similar to Aluminum Interlocked Armor except that it has a PVC jacket under the armor, as well as the PVC jacket over the armor. This gives TECK 90 even better protection against physical and chemical damage from its industrial environment, and may prove to be a better investment for long-term applications.

TECK 90 Armored Cable is suitable for a broad range of applications. TECK 90 is recommended for extreme operating conditions, in both wet and dry locations, in highly corrosive environments, and are resistant to mechanical abuse and ozone attack. They have an FT-4 flame rating, they are rated for Hazardous Locations, and they can be installed in racks, trays, ladders, and cable troughs.

TECK 90 has most of the benefits of CCW, but because of its Aluminum Interlocked Armor structure, it maintains excellent flexibility over its CCW counterpart.

Markets:
- Pulp & paper mills
- Mines
- Industrial plants

Available in 600 Volt and 1,000 Volt

	UL 1569	UL 1581	UL 66, Type XLPE/VW-1	UL Type MC - 600V	ICEA S-95-658/NEMA WC 70	ICEA T-29-520 (210,000 BTU/hr)	ICEA T-30-520 (70,000 BTU/hr)	IEEE 1202 (70,000 BTU/hr)/CSA FT4	CSA Standard C22.2 No.131 and No.174	CSA Approved number: LR1781	CSA FT1 and FT4	Hazardous Location Rating: HL	Meets EPA 40 CFR part 261	OSHA acceptable	NEC Type MC
TECK 90 - Multiconductor with Ground - 1kV, 600 Volt		X					X	X	X	X	X	X	X	X	X
600 Volt - 16 AWG Pairs/Triads - Overall shield	X	X	X	X	X	X		X							X
600 Volt - 16 AWG Pairs - Individual & Overall shield	X	X	X	X	X	X		X							X

Armored Cable Fittings

Omni Cable stocks a full line of Thomas & Betts Star Teck Extreme fittings for armored cable of all sizes. The STE cable fittings are designed for ordinary applications, and the STEX fittings are designed specifically for hazardous areas. Both are designed to withstand the harshest environments.

Application

Means for passing armored cables through a bulkhead or enclosure in a hazardous area. The fittings forms a mechanical grip and water/oil resistant termination. Fittings also provide a grounding continuity of armored cable.

Features

Some of the features of the Star Teck Extreme fittings include a removable armor-stop for greater cable ranges, a built-in sealing device, a patented Elastomeric collar ring/bushing, a built-in jacket stripping gauge, and a patented powergrip grounding ring.

Range

Star Teck Extreme fittings accommodate a broad range of cables. The hub range overlaps the adjacent hub range which minimizes the possibility of mismatching cables and fittings. Hub sizes are available in sizes from 1/2” to 4”, and will handle outer jacket diameters from 0.525” to 4.340”.

Environment Classification
- STE Series
  - Ordinary location
  - Class I, Division 2
  - NEMA 4, 4X, 6P
- STE050 - STE200
  - NEMA 6P
- STE250 - STE400
  - NEMA 4
- STE050 - STE400
  - NEMA 4X
- STEX Series
  - Ordinary location
  - Class I, Division 1, Groups A,B,C,D
  - Class II, Division 1, Groups E,F,G
  - NEMA 4, 4X, 6P

Armored Cable – Standard Location

Omni Kit #	Hub Size	O.D. Over Armor
ST050462	1/2"	.415" - .570"
STE050	1/2"	.520" - .895"
STE075	3/4"	.780" - 1.125"
STE100	1"	.870" - 1.295"
STE150	1 1/2"	1.280" - 1.805"
STE200	2"	1.665" - 2.215"
STE250	2 1/2"	2.105" - 2.680"

Armored Cable - Hazardous Location

Omni Kit #	Hub Size	O.D. Over Armor
STX050462	1/2"	.415" - .570"
STX050464	1/2"	.490" - .680"
STEX075	3/4"	.520" - .895"
STEX100	1"	.780" - 1.125"
STEX125	1 1/4"	.870" - 1.295"
STEX150	1 1/2"	.990" - 1.465"
STEX200	2"	1.280" - 1.805"
STEX250	2 1/2"	1.665" - 2.215"
STEX300	3"	2.105" - 2.680"

OMNICABLE

Power & Control
THHN / PVC - Tray Cable
XLP / PVC & CPE - Tray Cable
FR-EP / CPE - Tray Cable
Medium Voltage (5kV - 69kV)
Shielded Constructions
Various Custom Constructions

Instrumentation
POS and SPOS constructions
TOS and STOS constructions
THHN / PVC
XLP / PVC
XLP / CPE
FR-EP / CPE
300 Volt PLTC
600 Volt TC
Custom constructions/insulation/jackets available

Portable Cords
SO / SOOW, 2-50 Conductor
Type G, GG-C, SHD-GC
Type W
Bus Drop

Flexible Cables
Diesel Locomotive – DLO
Welding Cable
VFD – 3 and 4 Conductor
Jumper Cable – 5kV to 15kV
SDN® – Reel & Pendant
Alpha Wire / Lutze / LAPP USA

High-Temp Lead Wires
SF-2, SFF-2 in colors	(UL 150°C-200°C)
TGGT	(UL 250°C)
MG	(UL 450°C)
SRML, SRG, SRK, SRGT	(UL 150°C-200°C)
Teflon–E, EE, K, KK, PFA, Tefzel®	(UL 150°C-200°C)
Super High Temp Cables	(UL 450°C/Non-UL 980°C)

Hook-up
PVC Hook-up wire (UL 1007, UL 1015, UL 1061)
Irradiated PVC Hook-up wire (UL 1429, UL 1430, UL1431)
Neoprene Lead Wire (UL 3044, UL 3046, UL 3048)
Military Spec (M16878, M22759)
Harmonized PVC Hook-up
EPDM
SIS – VW-1 – All colors

Fiber Optics
Indoor, Indoor/Outdoor, Outdoor
Plenum and Riser
Tight Buffer and Loose Tube
Multi-mode and Single-mode
Armored

Bare and Tinned Copper
Stranded – Tinned and Bare
Solid – Tinned and Bare

Armored Cables – 600V, 5kV, 15kV
Aluminum Interlocked Armor - PVC or Non-PVC jacketed
Teck 90 – CSA – Control and Instrumentation
Continuous Corrugated Weld

Aluminum Cable
ACSR Aluminum Conductor, Steel Reinforced
Primary URD TR-XLP 15kV/25kV/35kV
XLP Triplex Service Drop Cable
XLP Triplex / Quadraplex Secondary URD

Sound, Security and Alarm
Thermostat
Plenum, CL2P, CMP
Coax – RG59, RG6, RG6 Quad
Fire Alarm – FPLR, FPLP – Article 725, 760, 800
2-Hour Fire Rated Circuit Integrity (CI, CIC, RHW)
Crestron / Lutron Equals

IMSA
19-1 and 20-1 Traffic Signal Cable
50-2 Lead-In
51-1, 51-3, 51-5 Loop Detector

Telephone
Indoor / Outdoor
High Speed Data – Cat5e, Cat6 (350-550MHz)
Direct Burial
Aerial
Figure 8

Building Wire
TFFN / TFN - Solid or Stranded
THHN / THWN - Solid or Stranded
XLP / USE
THW
XHHW-2 / XHHW-2 CT
Cathodic Protection
Photovoltaic

Cable Accessories
Fittings – Tray, Portable Cord, Armor
Medium Voltage Splices
Medium Voltage Terminations
Lugs for MV Terminations
Crimp Connectors for MV Splices

Value Added Services
Striping
Dyeing
Twisting
Bundling
Custom Constructions