

# Okotherm® CIC Fire Resistant Cable

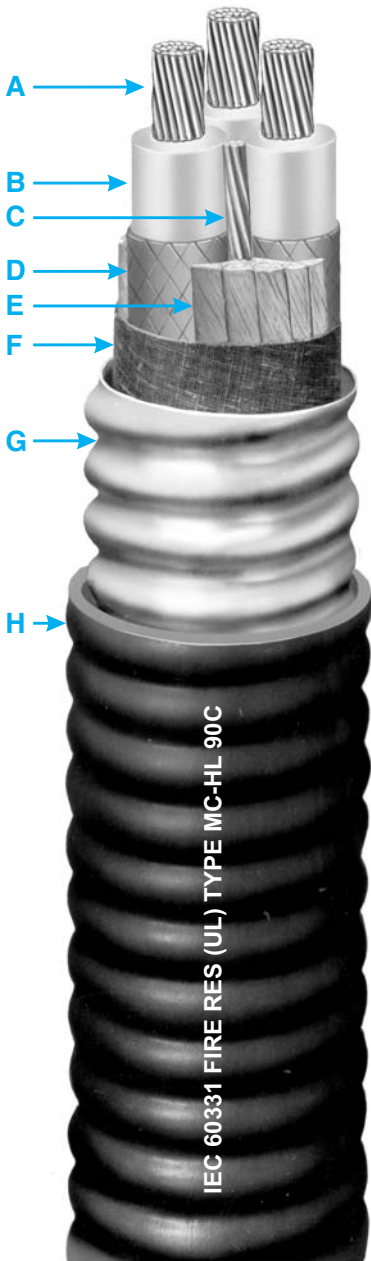


## 600V Power Cable - Type MC-HL C-L-X, Aluminum Sheath

3 Tinned or Nickel Coated Copper Conductors, 90°C Wet or Dry Rating

## 600/1000V Marine Shipboard Cable

For Cable Tray Use - Sunlight Resistant - For Direct Burial



- A Tinned or Nickel Coated Copper Conductors
- B Okotherm (Silicone) Thermoset Insulation
- C Coated Copper Grounding Conductor
- D Fiberglass Braid - Coded per ICEA
- E Glass Fillers
- F Cable Tape
- G Impervious, Continuous, Corrugated, Aluminum C-L-X Sheath
- H Black Okoseal Jacket

### Cable Description

Nickel coated or tinned coated copper conductors, Okotherm CIC fire resistant thermoset silicone insulation, with FR tape if required, color or number coded fiber glass braid, cabled conductors, grounding conductor, cable tape, aluminum CLX sheath, Okoseal (PVC) jacket.

**Conductors:** Tinned Coated Copper or Nickel Coated Copper

**Insulation:** Okotherm Thermoset Silicone, with FR tape if required

**Color Code:** ICEA S-73-532, Method 3 or 5  
Grounding Conductor: Uninsulated, same metal as phase conductor

**Braid:** Fiber Glass Braid

**Armor-CLX:** Continuously Welded and Corrugated Aluminum

**Outer Jacket:** Black PVC

### Applicable Industry Standards:

— UL 1569, 2225 & 1309 — ICEA S-95-658 (NEMA WC70), ICEA S-73-532 (NEMA WC 57) — ASTM B-33 & B-355

### Flame Tests:

IEC 60331, ICEA T-29-520, IEEE 1202

### Applications

Okotherm CIC 600 volt power cables are used in systems where, in the event of a fire, circuit integrity is required in order to maintain a process or to safely shut down the process. Fire resistance is determined by compliance to the IEC 60331 circuit integrity fire test. Okotherm CIC cables maintain circuit integrity based on qualification to the IEC standard 60331 for all temperatures and times up to and including 2000°F for three hours. When exposed to a fire, the Okotherm CIC insulation becomes an electrically insulating ceramic-like ash that is capable of maintaining the operating voltage.

Okotherm CIC CLX Type MC-HL cables with the impervious, continuous aluminum corrugated sheath are recommended as an alternative to a wire conduit system. These cables may be installed indoors or outdoors, in wet or dry locations, as open runs of cable secured to supports not more than six feet apart, in cable tray, as an aerial cable on a messenger, in any approved raceway, direct burial, or encased in concrete. They are also approved for use in Class I & II, Division 1 and 2, Class III,

Division 1 and 2 and Class I, Zones 1 & 2 hazardous locations per NEC Articles 501, 502, 503, and 505.

Okotherm CIC CLX Type MC-HL power cables are authorized for use on services, feeders and branch circuits for power, lighting, control and signaling circuits in accordance with NEC articles 330 and 725.

### Product Features

- UL Listed as Type MC-HL cable E38916 and Marine Shipboard Cable E137931.
- UL Listed for cable tray use, direct burial (2/C 14 AWG and larger) and sunlight resistant.
- Passes the IEEE 383-1974 and IEEE 1202-1991 vertical tray flame tests.
- Passes the 210,000 BTU ICEA T-29-520 Vertical Tray Flame Test.
- Complete pre-packaged, factory-tested wiring system — color coded.
- C-L-X cables are quality control inspected to meet or exceed applicable UL standards.
- 90°C continuous operating temperature in all types of installations.
- 130°C emergency rating.
- 250°C short circuit rating.
- Good EMI shielding characteristics.
- Impervious, continuous metallic sheath excludes moisture, gases and liquids.
- Reduced sealing fitting requirements in Class I, Division 2 or Zone 2 hazardous locations, NEC Section 501.15(E)(3) or 505.16(C)(2)(c).
- Lower installed system cost than conduit or EMT systems.
- Provides excellent grounding safety.
- Excellent compression and impact resistance.
- Continuous long lengths.
- Minimum installation temperature of -40°C or °F.
- American Bureau of Shipping (ABS) listed as CWCMC Type MC-HL.
- Optional LSZH jacket available.
- Fire Resistant - Qualified to meet IEC 60331, -11 & -21, including temperature and time up to 2000°F for 3 hours, respectively.
- Fire Resistant - Qualified to meet the Hydrocarbon Pool Circuit Integrity Fire Test, utilizing the UL 1709 time-temperature curve, with minimum requirements of 65,000 BTU/h-ft<sup>2</sup> heat flux, 2000°F flame temperature, 30 minute test duration, and 15A load.

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# Product Data Section 4: Sheet 12

Catalog Number	Conduct Size AWG or kcmil	Number of Conductors	Insulation Thickness - mils	Grounding Conductor - AWG (1)	Core O.D. - Inches	C-L-X O.D. - Inches	Jacket Thickness - mils	Approx. O.D. - Inches	Cross-Sectional Area (sq. in.)†	Approx. Net Weight lbs./1000'	Approx. Ship Weight lbs./1000'	90°C Wet or Dry NEC Ampacity (2)*	75°C Wet NEC Ampacity*
<b>NICKEL COPPER, IEC Rating: 2000°F for 3 hours</b>													
546-15-3403	14(7X)	3	45	14	0.46	0.67	50	0.78	0.48	276	371	15	15
546-15-3503	12(7X)			12	0.50	0.71	50	0.82	0.53	367	426	20	20
546-15-3603	10(7X)			10	0.55	0.75	50	0.86	0.65	448	513	30	30
571-15-3553	8(133X)	3	60	10	0.73	0.97	50	1.08	0.92	631	694	55	50
571-15-3653	6(133X)			8	0.82	1.06	50	1.17	1.08	806	884	75	65
571-15-3753	4(133X)			8	0.94	1.19	50	1.30	1.43	1002	1163	95	85
<b>TINNED COPPER, IEC Rating: 2000°F for 3 hours</b>													
571-15-3803	2(7X)	3	60	6	1.04	1.19	50	1.30	1.54	1228	1433	130	115
571-15-3903	1(19X)			80	1.12	1.37	50	1.48	1.72	1521	1686	145	130
571-15-3913	1/0(19X)			80	1.20	1.47	50	1.58	1.96	1836	1953	170	150
571-15-3923	2/0(19X)			80	1.31	1.58	60	1.69	2.35	2183	2391	195	175
571-15-3943	4/0(19X)			80	1.52	1.83	60	1.96	3.02	3401	3463	260	230
571-15-3953	250(37X)	3	95	4	1.72	2.06	60	2.19	3.77	3823	4144	290	255
571-15-3963	350(37X)			3	1.93	2.28	75	2.44	4.68	5102	5665	350	310
571-15-3973	500(37X)			2	2.21	2.63	75	2.78	5.90	6859	7453	430	380
571-15-3983	750(61X)			1	2.67	3.11	85	3.30	8.55	10156	11175	535	475

(1) - Uninsulated, same metal as phase conductor

Okonite's web site, [www.okonite.com](http://www.okonite.com) contains the most up to date information.

†**Cross-sectional** area for calculation of cable tray fill in accordance with NEC Section 392.22.

### (2) Ampacities

Ampacities are based on 310.16 of the National Electrical Code for conductors rated 90°C, in a multi-conductor cable, at an ambient temperature of 30°C (86°F). The 75°C column is provided for additional information.

The ampacities shown apply to open runs of cable, installation in any approved raceway, direct burial in the earth, or as aerial cable on a messenger. Derating for more than three current carrying conductors within the cable is in accordance with NEC Section 310.15(C)(1).

The ampacities shown also apply to cables installed in cable tray in accordance with NEC Section 392.80.

\*Current limited to 15, 20 and 30 amps per Section 240.4(D) of the NEC for #14, #12 and #10 AWG, respectively.