



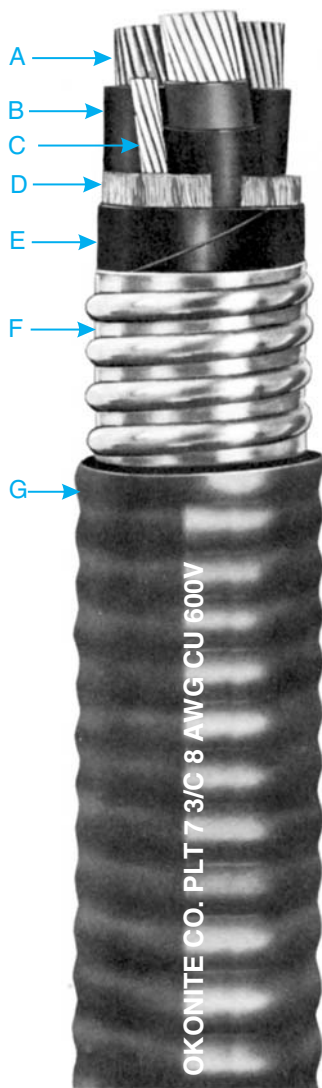
# Aluminum Loxarmor<sup>®</sup> Type MC (XHHW-2)



## 600V Power Cable—Aluminum Interlocked Armor

Copper Conductors/90°C Wet or Dry Rating

For Cable Tray Use - Sunlight Resistant - For Direct Burial



- A Bare, Stranded Copper Conductor
- B X-Olene Insulation — Color Coded for Identification
- C Bare, Stranded Copper Grounding Conductor
- D Non-Hygroscopic Fillers, as necessary
- E Binder Tape
- F Loxarmor — Aluminum Interlocked Armor
- G Black Okoseal Jacket, when specified

### Insulation

X-Olene<sup>®</sup> is Okonite's trade name for its chemically cross-linked polyethylene, with high dielectric strength.

### Color Coding

Conductors are color coded using base colors and tracers in accordance with the Conductor Identification Table on the back of this Data Sheet.

### Assembly and Coverings

The individual conductors are cabled together with non-hygroscopic fillers as necessary and a binder tape overall. One bare stranded copper grounding conductor is placed in one of the outer interstices. The Loxarmor<sup>®</sup> is an interlocked aluminum armor with good mechanical strength. For direct burial in the ground, embedment in concrete, or for areas subjected to corrosive atmospheres, the Loxarmor is protected with an Okoseal<sup>®</sup> (PVC) jacket.

### Applications

Loxarmor power and control cables are recommended as an economical alternate to a wire in conduit system. They are designed specifically for use on feeders and branch circuits in power distribution systems. Loxarmor power cables may be installed in both exposed and concealed work, wet and dry locations, direct burial in the earth, or embedded in concrete. They may be installed on metal racks, troughs, in cable trays or secured to supports not greater than 6 feet apart. When used with approved terminators, Loxarmor may be used in Class I and II (Division 2) and Class III (Division 1 and 2) hazardous locations - NEC Articles 501, 502 and 503.

### Specifications

**Conductors:** Uncoated soft copper per ASTM B-3. Sizes smaller than #8 are compact stranded per ASTM B-8. Sizes #8 and larger are compact stranded per ASTM B-496.

**Insulation:** X-Olene per ICEA S-95-658/NEMA WC-70 and UL 44. Listed UL Type XHHW-2. Meets MIL-DTL-1377H, section 4.8.4.1.2 cold bend at -66°C and ASTM D746 brittle point at -76°C.

**Conductor Identification:** Base colors and tracers per ICEA S-73-532/NEMA WC-57.

Sizes 8 AWG and larger, black with print number and color.

**Grounding Conductor:** Bare, soft copper per ASTM B-3. Stranding per ICEA S-95-658/WC-57 and UL 1569.

**Assembly:** Per UL 1569 with binder tape overall.

**Loxarmor:** Per ICEA S-95-658 NEMA WC-57, Section 4.5.7 and UL 1569.

**Jacket:** When specified, black Okoseal (PVC) per UL 1569. Meets ASTM D746 brittle point at -40°C.

UL Listed as Type MC cable.

### Product Features

- Cable complies with UL 1569 for Type MC Metal-Clad Cable.
- Complete pre-packaged, factory-tested wiring system - color coded.
- Flame retardant - passes the vertical tray flame test requirements of IEEE 383-1974 and 1202, UL 1569 ICEA T-29-520(210,000 BTU/hr.)
- Loxarmor cables are quality control inspected to meet or exceed applicable UL standards.
- 90°C continuous rating in wet or dry locations, 130°C emergency overload rating, 250°C short circuit rating.
- Lower installed cost compared to wire in conduit or EMT.
- Excellent compression and impact resistance.
- Easily re-routed in the event of system changes.
- UL Listed for cable tray use.
- UL Listed for direct burial.
- UL Listed sunlight resistant.

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## Product Data Section 4: Sheet 3

**600 Volt Power Cable-Aluminum Interlocked Armor**  
Copper Conductors/90°C Wet or Dry Rating  
**For Cable Tray Use - Sunlight Resistant - for Direct Burial**

Catalog Number	Conductor Size AWG kcmil	Number of Conductors	Insulation Thickness - mils	Grounding Conductor(s) AWG*	Core O.D. - Inches	Core O.D. - mm	Loxarmor O.D. - Inches	Loxarmor O.D. - mm	Jacket Thickness - mils	Jacket Thickness - mm	Approx. O.D. - Inches	Approx. O.D. - mm	Cross-Sectional Area lbs./1000'	Approx. Net Weight lbs./1000'	Approx. Ship Weight lbs./1000'	NEC Ampacity (1)
112-31-5744 112-31-5745	8(7X)	3 4	45	10	0.53 0.59	13.5 15.0	0.76 0.82	19.3 20.8	50 50	1.27 1.27	0.87 0.93	22.1 23.6	0.59 0.68	412 492	476 556	55 44
112-31-5746 112-31-5747	6(7X)	3 4	45	8	0.60 0.69	15.2 17.5	0.83 0.92	21.1 23.4	50 50	1.27 1.27	0.94 1.03	23.9 26.2	0.69 0.83	549 672	613 752	75 60
112-31-5748 112-31-5749	4(7X)	3 4	45	8	0.68 0.79	17.3 20.1	0.91 1.02	23.1 25.9	50 50	1.27 1.27	1.02 1.13	25.9 28.7	0.82 1.00	697 906	777 986	95 76
112-31-5750 112-31-5751	2(7X)	3 4	45	6	0.81 0.95	20.6 24.1	1.04 1.18	26.4 30.0	50 50	1.27 1.27	1.15 1.29	29.2 32.8	1.04 1.31	1002 1317	1082 1423	130 104
112-31-5752 112-31-5753	1(19X)	3 4	55	6	0.92 1.03	23.4 26.2	1.15 1.26	29.2 32.0	50 50	1.27 1.27	1.26 1.37	32.0 34.8	1.25 1.47	1212 1527	1318 1643	150 120
112-31-5754 112-31-5755	1/0(19X)	3 4	55	6	1.00 1.12	25.4 28.5	1.23 1.35	31.2 34.3	50 50	1.27 1.27	1.34 1.46	34.0 37.1	1.41 1.67	1474 1864	1574 2007	170 136
112-31-5756 112-31-5757	2/0(19X)	3 4	55	6	1.09 1.22	27.7 31.0	1.32 1.45	33.5 36.8	50 50	1.27 1.27	1.43 1.56	36.3 39.6	1.61 1.91	1772 2254	1915 2397	195 156
112-31-5760 112-31-5761	4/0(19X)	3 4	55	4	1.31 1.46	33.3 37.1	1.54 1.69	39.1 42.9	60 60	1.52 1.52	1.67 1.82	42.4 46.2	— —	2674 3428	2817 3662	260 208
112-31-5762 112-31-5763	250(37X)	3 4	65	4	1.45 1.62	36.8 41.1	1.68 1.88	42.7 47.8	60 60	1.52 1.52	1.81 2.01	46.0 51.1	— —	3099 4080	3333 4336	290 232
112-31-5764 112-31-5765	350(37X)	3 4	65	3	1.65 1.85	41.9 49.8	1.91 2.11	48.5 56.9	60 60	1.52 1.52	2.04 2.24	51.8 61.0	— —	4224 5473	4516 6032	350 280
112-31-5766 112-31-5767	500(37X)	3 4	65	2	1.90 2.13	48.3 54.1	2.16 2.39	54.9 60.7	60 75	1.52 1.90	2.30 2.55	58.4 64.8	— —	5810 7571	6369 8163	430 344
112-31-5768 112-31-5769	750(61X)	3 4	80	1	2.33 2.61	59.2 66.3	2.59 2.93	65.8 74.4	75 75	1.90 1.90	2.75 3.09	69.9 78.5	— —	8561 11303	9271 12223	535 428
112-31-5770 112-31-5771	1000(61X)	3 4	80	1/0 1/0	2.67 2.98	67.8 75.7	2.99 2.98	76.0 75.7	75 85	1.90 2.16	3.15 3.03	80.0 77.0	— —	11342 14807	12275 15740	615 492

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

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

When conductors smaller than #8 AWG are required, C-L-X Type MC is recommended.

Composite power and control cables are available on special order.

### (1) Ampacities

Ampacities are based on Table 310.15(B)(16) of the National Electrical Code for XHHW-2 conductors rated 90°C, in a multi-conductor cable, at an ambient temperature of 30°C (86°F). Derating for more than three current carrying conductors within the cable is in accordance with NEC Section 310.15(B)(3)(a).

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

\*Grounds may be split

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### Without PVC Jacket

Catalog Number	Conductor Size AWG kcmil	Number of Conductors	Insulation Thickness - mils	Grounding Conductor(s) AWG*	Core O.D. - inches	Core O.D. - mm	Loxarmor O.D. - Inches	Loxarmor O.D. - mm	Approx. O.D. - inches	Approx. O.D. - mm	Cross-Sectional Area (sq. in.) †	Approx. Net Weight lbs./1000'	Approx. Ship Weight lbs./1000'	NEC Ampacity (1)
112-31-5644	8(7X)	3	45	10	0.53	13.5	0.76	19.3	0.76	19.3	0.45	331	395	55
112-31-5645		4		10	0.59	15.0	0.82	20.8	0.82	20.8	0.53	405	469	44
112-31-5646	6(7X)	3	45	8	0.60	15.2	0.83	21.1	0.83	21.1	0.54	461	525	75
112-31-5647		4		8	0.69	17.5	0.92	23.4	0.92	23.4	0.66	576	656	60
112-31-5648	4(7X)	3	45	8	0.68	17.3	0.91	23.1	0.91	23.1	0.65	602	682	95
112-31-5649		4		8	0.79	20.1	1.02	25.9	1.02	25.9	0.82	800	880	76
112-31-5650	2(7X)	3	45	6	0.81	20.6	1.04	26.4	1.04	26.4	0.85	894	974	130
112-31-5651		4		6	0.95	24.1	1.18	30.0	1.18	30.0	1.09	1195	1301	104
112-31-5652	1(19X)	3	55	6	0.92	23.4	1.15	29.2	1.15	29.2	1.04	1093	1199	150
112-31-5653		4		6	1.03	26.2	1.26	32.0	1.26	32.0	1.25	1397	1513	120
112-31-5654	1/0(19X)	3	55	6	1.00	25.4	1.23	31.2	1.23	31.2	1.19	1345	1435	170
112-31-5655		4		6	1.12	28.5	1.35	34.3	1.35	34.3	1.43	1725	1825	136
112-31-5656	2/0(19X)	3	55	6	1.09	27.7	1.32	33.5	1.32	33.5	1.37	1633	1733	195
112-31-5657		4		6	1.22	31.0	1.45	36.8	1.45	36.8	1.65	2106	2249	156
112-31-5660	4/0(19X)	3	55	4	1.31	33.3	1.54	39.1	1.54	29.1	—	2478	2621	260
112-31-5661		4		4	1.46	37.1	1.69	42.9	1.69	42.9	—	3218	3395	208
112-31-5662	250(37X)	3	65	4	1.45	36.8	1.68	42.7	1.68	42.7	—	2892	3035	290
112-31-5663		4		4	1.62	41.2	1.88	47.8	1.88	47.8	—	3847	4113	232
112-31-5664	350(37X)	3	65	3	1.65	41.9	1.91	48.5	1.91	48.5	—	3989	4255	350
112-31-5665		4		3	1.85	47.0	2.11	53.6	2.11	53.6	—	5186	5576	280
112-31-5666	500(37X)	3	65	2	1.90	48.3	2.16	54.9	2.16	54.9	—	5519	5909	430
112-31-5667		4		2	2.13	54.1	2.39	60.7	2.39	60.7	—	7175	7734	344
112-31-5668	750(61X)	3	80	1	2.33	59.2	2.59	65.8	2.59	65.8	—	8142	8769	535
112-31-5669		4		1	2.61	66.3	2.87	72.9	2.87	72.9	—	10644	11406	428
112-31-5670	1000(61X)	3	80	1/0	2.67	67.8	2.93	74.4	2.93	74.4	—	10677	11439	615
112-31-5671		4		1/0	2.98	75.7	3.24	82.3	3.24	82.3	—	13996	15074	492

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### Conductor Color Coding Sequence

Conductor Number	Base Color	Tracer Color
1	Black	
2	Red	
3	Blue	
4	Orange	
5	Yellow	
6	Brown	
7	Red	Black
8	Blue	Black
9	Orange	Black
10	Yellow	Black
11	Brown	Black
12	Black	Red
13	Blue	Red
14	Orange	Red
15	Yellow	Red
16	Brown	Red
17	Black	Blue
18	Red	Blue
19	Orange	Blue
20	Yellow	Blue
21	Brown	Blue
22	Black	Orange
23	Red	Orange
24	Blue	Orange
25	Yellow	Orange
26	Brown	Orange
27	Black	Yellow
28	Red	Yellow
29	Blue	Yellow
30	Orange	Yellow
31	Brown	Yellow
32	Black	Brown
33	Red	Brown
34	Blue	Brown
35	Orange	Brown
36	Yellow	Brown
37	Black	

#### Color Coding

Sizes 14, 12 & 10 AWG:  
per ICEA Method 1, E-2 color  
sequence

Sizes 8 AWG and larger.  
Surface Printing of Numbers and color  
designation per ICEA Method 3, E-2  
color sequence

**Special Order:** Any or all of the following conductors may be added when specifically requested by the customer to meet his specific application requirements. These conductor codings comply with UL and NEC requirements.

<u>Purpose</u>	<u>Base Color</u>	<u>Tracer Color</u>
Equipment Grounding	Uninsulated Green Green	1 or more continuous yellow stripes
Grounded	White White White White White White	Black continuous stripe Red continuous stripe Blue continuous stripe Orange continuous stripe Brown continuous stripe Numeric Printing