

# MC-HL CONTROL CABLE, 600 VOLTS

## CONTROL WITH GROUNDING CONDUCTOR

**APPLICATION:**

UL type MC-HL armored control cable for use in circuits not exceeding 600 volts cables are intended for use as services, feeders and branch circuits for power lighting, control, and signal circuits in wet or dry locations. Installed indoors or outdoors, directly buried, embedded in concrete, in a raceway, as aerial cable on a messenger, in cable trays or as exposed runs.

**STANDARDS:**

1. Listed by UL as Type MC cable per Standard 1569.
2. Individual conductors UL listed as Type XHHW-2 (90°C wet or dry) per UL Standard 44.
3. Overall jacket UL listed as Sunlight Resistant.
4. Cables pass UL and IEEE-383 ribbon burner tests and are UL listed For CT Use.,
5. Cables comply with IEEE-1202 flame test.
6. Cables pass ICEA 210,000 BTU/hr. ribbon burner flame test.
7. Cables UL listed for Direct Burial.
8. Meets ASTM D746 brittleness temperature at or below -40°C
9. UL Marine Shipboard Cable
10. ABS Listed for CWCMC

**CONSTRUCTION:** Individual conductors of stranded copper, XLP (crosslinked polyethylene) insulation, surface print phase identification. Two or more conductors twisted together with one insulated copper conductor in each valley, suitable fillers, binder tape, continuously welded and corrugated aluminum alloy sheath, black sunlight resistant PVC jacket overall.



USAWC Part #	Control Cond. Size	No. of Cond.	Green Insulat. Ground Size	Control Insul. Thick. Mils	Nom. Diam. Over Armor Inches	PVC Jkt. Thick. Mils	Nom. Diam. Over PVC Jkt. Inches	Weight lbs/ 1000 ft		90°C AMPACITY @ 30°C AMBIENT
								Net	Copper	
<b>14AWG</b>										
14-02MCHL	14	2	14	30	0.49	50	0.60	163	39	15
14-03MCHL	14	3	14	30	0.53	50	0.64	192	52	15
14-04MCHL	14	4	14	30	0.58	50	0.69	222	65	15
14-05MCHL	14	5	14	30	0.60	50	0.71	245	78	15
14-06MCHL	14	6	14	30	0.62	50	0.73	267	91	15
14-08MCHL	14	8	14	30	0.71	50	0.82	321	117	15
14-11MCHL	14	11	14	30	0.80	50	0.91	395	156	12
14-18MCHL	14	18	14	30	0.93	50	1.04	554	247	12
14-36MCHL	14	36	14	30	1.24	50	1.35	948	481	10
<b>12AWG</b>										
12-02MCHL	12	2	12	30	0.53	50	0.64	200	60	20
12-03MCHL	12	3	12	30	0.58	50	0.69	239	80	20
12-04MCHL	12	4	12	30	0.67	50	0.78	310	100	20
12-05MCHL	12	5	12	30	0.67	50	0.78	324	120	20
12-06MCHL	12	6	12	30	0.67	50	0.78	338	140	20
12-08MCHL	12	8	12	30	0.80	50	0.91	426	180	20
12-11MCHL	12	11	12	30	0.89	50	1.00	519	240	15
12-18MCHL	12	18	12	30	1.02	50	1.13	739	360	15
12-36MCHL	12	36	12	30	1.37	50	1.48	1302	700	12
<b>10AWG</b>										
10-02MCHL	10	2	10	30	0.58	50	0.69	253	96	30
10-03MCHL	10	3	10	30	0.62	50	0.73	303	128	30
10-04MCHL	10	4	10	30	0.67	50	0.78	348	160	30
10-06MCHL	10	6	10	30	0.75	50	0.86	451	224	28
10-08MCHL	10	8	10	30	0.89	50	1.00	568	288	28
10-11MCHL	10	11	10	30	0.97	50	1.08	704	384	20

Specification

**MC-HL ARMORED CONTROL CABLE WITH GROUNDING CONDUCTOR, 600V**

**Multi- Conductor, XLPE, 600V**

1. SCOPE

- 1.1 This specification describes multi-conductor XLP cross-linked polyethylene insulated, Type MC-HL armored control cable for use in circuits not exceeding 600 volts at conductor temperatures of 90°C in wet or dry locations. Cables are intended for use as services, feeders and branch circuits for power, lighting, control and signal circuits in wet or dry locations including cable tray, raceways, direct burial, embedded in concrete and as aerial cable on a messenger.
- 1.2 For use in Class I,II and III, Divisions 1 and 2; and Class I, Zones 1 and 2 hazardous locations per NEC Articles 501,502,503 and 505.

2 STANDARDS

- 2.1 The following standards shall form a part of this specification to the extent specified herein:
  - 2.1.1 ICEA Pub. No. S-73-532, Nema Pub. No. WC57 for Control, Thermocouple Extension and Instrumentation Cables.
  - 2.1.2 UL 44 Rubber Insulated Wires and Cables
  - 2.1.3 UL 1569 Metal Clad Cables
  - 2.1.4 UL2225 Cables and Cable Fittings for Use in Hazardous Locations

3 CONDUCTORS

- 3.1 Class B stranded bare annealed uncoated copper per ASTM B3. Compressed Class B stranding per ASTM B8. Grounding conductor class B stranded annealed copper per ASTM B3 and B8 insulated with XLP (green) sized in accordance with NEC Table 250.122

4 INSULATION

- 4.1 Each conductor shall be insulated with (XLP) cross-linked polyethylene meeting the requirements of ICEA S-73-532 , UL 44 and Listed XHHW-2.

5 CIRCUIT IDENTIFICATION

- 5.1 Color-coded per ICEA Method 1, Table E2

6 ASSEMBLY

- 6.1 The insulated conductors and ground wire shall be cabled together with non-hygroscopic fillers, when necessary to make round.

7 CABLE TAPE

- 7.1 A suitable cable tape shall be applied over the assembly to hold the core together and provide bedding for the armor.

8 ARMOR

- 8.1 Continuously welded and corrugated aluminum alloy sheath per UL 1569 and UL 2225.

9 JACKET

- 9.1 A flame-retardant, moisture and sunlight resistant Polyvinyl Chloride (black) shall be applied overall.

10 IDENTIFICATION

- 10.1 All cable shall be identified by means of surface ink printing indicating manufacturer, size, insulation type, insulation thickness, voltage rating, insulation level, year of manufacture and UL designations.

11 TESTS

- 11.1 Individual conductors and completed cables shall be tested in accordance with UL requirements of MC-HL cables having XHHW-2 insulated conductors.