CCW® Armored Composite Power and Control Without Ground

UL Type MC, XLPE, 600 V, 90°C, Cable Tray Use, Sunlight-Resistant, Direct Burial
UL Marine Shipboard Cable, ABS CWCMC

Product Construction:

Conductor:
- Bare annealed copper per ASTM B3
- Sizes 10 AWG and smaller are Class B compressed stranding per ASTM B8
- Sizes 8 AWG and larger are compact stranding per ASTM B496

Insulation:
- Cross-Linked Polyethylene (XLPE) insulation per ICEA S-95-658 and UL 44, Listed XHHW-2
- Power conductors sizes 6 AWG and smaller are color-coded per ICEA Method 1, Table E2
- Power conductors sizes 4 AWG and larger are black with printed numbers per ICEA Method 4
- Control conductors are color-coded black, red, blue and yellow

Cable Assembly:
- Insulated conductors are cabled together with non-hygroscopic fillers when required
- A binder tape, when required, is applied over the cabled core

CCW Armor:
- Impervious, continuously welded and corrugated aluminum alloy sheath per UL 1569
- CCW armor conductivity meets the grounding requirements of NEC Article 250

Jacket:
- Flame-retardant, moisture- and sunlight-resistant Polyvinyl Chloride (PVC), black
- Low temperature performance meets ASTM D746 brittleness temperature at or below -40°C

Applications:

- CCW armored Composite Power and Control cables offer an economical, rugged and reliable alternative to labor-intensive cable in conduit wiring methods
- For use in Class I and II, Division 2; Class III, Divisions 1 and 2; and Class I, Zone 2 hazardous locations per NEC Articles 501, 502, 503 and 505
- For use as services, feeders and branch circuits for power, lighting, control, and signal circuits in accordance with NEC Articles 330 and 725
- Installed indoors or outdoors, wet or dry locations, directly buried, embedded in concrete, in a raceway, as aerial cable on a messenger, in cable trays, or as exposed runs secured to supports in accordance with NEC Article 330
- Recognized for use on fixed or floating offshore petroleum facilities as recommended by the American Petroleum Institute

Features:

- CCW armor provides an impervious barrier to moisture, gas and liquids
- CCW armor provides EMI shielding performance
- Factory assembled and tested cable for use as an alternative to cable in conduit wiring systems

Features: (cont'd.)

- Meets cold impact at -40°C
- 90˚C continuous operating temperature, wet or dry
- 130˚C emergency rating
- 250˚C short circuit rating

Specifications:

Design Adherence:
- ICEA S-95-658/WC 70 Standard for Non-Shielded Power Cable, 2 kV or Less
- UL 44 Rubber Insulated Wires and Cables
- UL 1569 Metal Clad Cables
- UL 1309 Marine Shipboard Cable

Flame Tests:
- ICEA T-29-520 (210,000 BTU/hr)
- IEEE 383 (70,000 BTU/hr)
- CSA FT4
- IEEE 1202 (70,000 BTU/hr)
- UL 1581 (70,000 BTU/hr)
- IEC 60332-3 Cat. A

Compliances:
- UL Type MC, XHHW-2, SUN RES, CT USE, DIR BUR, -40°C, UL File # E69797
- UL Listed Marine Shipboard, UL File # E85994
- American Bureau of Shipping (ABS) Listed for CWCMC
- RoHS Compliant

General Cable

ABS

RoHS Compliant Directive 2011/65/EU

UL LISTED

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CATALOG NUMBER	POWER COND. SIZE (AWG)	POWER INSULATION THICKNESS		CONTROL COND. SIZE (AWG)	CONTROL INSULATION THICKNESS		NOMINAL CORE O.D.		NOMINAL ARMOR O.D.		JACKET THICKNESS		NOMINAL OVERALL O.D.		CROSS-SECTIONAL AREA[1]	APPROXIMATE NET WEIGHT		90°C AMPACITY @ 30°C AMBIENT[2]
		mils	mm		mils	mm	INCHES	mm	INCHES	mm	mils	mm	INCHES	mm	(SQ. IN.)	LBS/1000 FT	kg/1000 m	
9650.123143000	3x#12 (7/W) (3.31 mm²)	30	0.76	3x#14 (7/W) (2.08 mm²)	30	0.76	0.49	12.4	0.71	18.0	50	1.27	0.82	20.8	0.54	307	457	20
9650.123144000	3x#12 (7/W) (3.31 mm²)	30	0.76	4x#14 (7/W) (2.08 mm²)	30	0.76	0.49	12.4	0.71	18.0	50	1.27	0.82	20.8	0.54	323	481	20
9650.124143000	4x#12 (7/W) (3.31 mm²)	30	0.76	3x#14 (7/W) (2.08 mm²)	30	0.76	0.49	12.4	0.71	18.0	50	1.27	0.82	20.8	0.54	365	543	20
9650.124144000	4x#12 (7/W) (3.31 mm²)	30	0.76	4x#14 (7/W) (2.08 mm²)	30	0.76	0.53	13.5	0.75	19.1	50	1.27	0.86	21.8	0.59	388	577	20
9650.103143000	3x#10 (7/W) (5.26 mm²)	30	0.76	3x#14 (7/W) (2.08 mm²)	30	0.76	0.53	13.5	0.75	19.1	50	1.27	0.86	21.8	0.59	384	571	30
9650.103144000	3x#10 (7/W) (5.26 mm²)	30	0.76	4x#14 (7/W) (2.08 mm²)	30	0.76	0.58	14.7	0.80	20.3	50	1.27	0.91	23.1	0.66	392	583	30
9650.103123000	3x#10 (7/W) (5.26 mm²)	30	0.76	3x#12 (7/W) (3.31 mm²)	30	0.76	0.53	13.5	0.75	19.1	50	1.27	0.86	21.8	0.59	410	610	30
9650.104143000	4x#10 (7/W) (5.26 mm²)	30	0.76	3x#14 (7/W) (2.08 mm²)	30	0.76	0.58	14.7	0.80	20.3	50	1.27	0.91	23.1	0.66	412	613	30
9650.104144000	4x#10 (7/W) (5.26 mm²)	30	0.76	4x#14 (7/W) (2.08 mm²)	30	0.76	0.58	14.7	0.80	20.3	50	1.27	0.91	23.1	0.66	428	637	30
9650.104123000	4x#10 (7/W) (5.26 mm²)	30	0.76	3x#12 (7/W) (3.31 mm²)	30	0.76	0.58	14.7	0.80	20.3	50	1.27	0.91	23.1	0.66	436	649	30
9650.104124000	4x#10 (7/W) (5.26 mm²)	30	0.76	4x#12 (7/W) (3.31 mm²)	30	0.76	0.58	14.7	0.80	20.3	50	1.27	0.91	23.1	0.66	460	685	30
9650.083143000	3x#8 (7/W) (8.36 mm²)	45	1.14	3x#14 (7/W) (2.08 mm²)	30	0.76	0.58	14.7	0.80	20.3	50	1.27	0.91	23.1	0.66	424	631	55
9650.083144000	3x#8 (7/W) (8.36 mm²)	45	1.14	4x#14 (7/W) (2.08 mm²)	30	0.76	0.62	15.7	0.84	21.3	50	1.27	0.91	23.1	0.66	455	677	55
9650.083123000	3x#8 (7/W) (8.36 mm²)	45	1.14	3x#12 (7/W) (3.31 mm²)	30	0.76	0.58	14.7	0.80	20.3	50	1.27	0.95	24.1	0.72	455	677	55
9650.083124000	3x#8 (7/W) (8.36 mm²)	45	1.14	4x#12 (7/W) (3.31 mm²)	30	0.76	0.62	15.7	0.84	21.3	50	1.27	0.91	23.1	0.66	495	737	55
9650.084143000	4x#8 (7/W) (8.36 mm²)	45	1.14	3x#14 (7/W) (2.08 mm²)	30	0.76	0.62	15.7	0.84	21.3	50	1.27	0.95	24.1	0.72	505	752	44
9650.084144000	4x#8 (7/W) (8.36 mm²)	45	1.14	4x#14 (7/W) (2.08 mm²)	30	0.76	0.67	17.0	0.89	22.6	50	1.27	1.00	25.4	0.80	530	789	44
9650.084123000	4x#8 (7/W) (8.36 mm²)	45	1.14	3x#12 (7/W) (3.31 mm²)	30	0.76	0.67	17.0	0.89	22.6	50	1.27	1.00	25.4	0.80	535	796	44
9650.084124000	4x#8 (7/W) (8.36 mm²)	45	1.14	4x#12 (7/W) (3.31 mm²)	30	0.76	0.71	18.0	0.93	23.6	50	1.27	1.04	26.4	0.86	576	857	44
9650.063143000	3x#6 (7/W) (13.3 mm²)	45	1.14	3x#14 (7/W) (2.08 mm²)	30	0.76	0.62	15.7	0.84	21.3	50	1.27	0.95	24.1	0.72	525	781	75
9650.063144000	3x#6 (7/W) (13.3 mm²)	45	1.14	4x#14 (7/W) (2.08 mm²)	30	0.76	0.62	15.7	0.84	21.3	50	1.27	0.95	24.1	0.72	545	811	75
9650.063123000	3x#6 (7/W) (13.3 mm²)	45	1.14	3x#12 (7/W) (3.31 mm²)	30	0.76	0.62	15.7	0.84	21.3	50	1.27	0.95	24.1	0.72	556	827	75
9650.063124000	3x#6 (7/W) (13.3 mm²)	45	1.14	4x#12 (7/W) (3.31 mm²)	30	0.76	0.71	18.0	0.93	23.6	50	1.27	1.03	26.2	0.84	606	902	75
9650.064143000	4x#6 (7/W) (13.3 mm²)	45	1.14	3x#14 (7/W) (2.08 mm²)	30	0.76	0.71	18.0	0.93	23.6	50	1.27	1.04	26.4	0.86	657	978	60
9650.064144000	4x#6 (7/W) (13.3 mm²)	45	1.14	4x#14 (7/W) (2.08 mm²)	30	0.76	0.71	18.0	0.93	23.6	50	1.27	1.04	26.4	0.86	667	993	60
9650.064123000	4x#6 (7/W) (13.3 mm²)	45	1.14	3x#12 (7/W) (3.31 mm²)	30	0.76	0.75	19.1	0.97	24.6	50	1.27	1.08	27.4	0.93	687	1,022	60
9650.064124000	4x#6 (7/W) (13.3 mm²)	45	1.14	4x#12 (7/W) (3.31 mm²)	30	0.76	0.75	19.1	0.97	24.6	50	1.27	1.08	27.4	0.93	717	1,067	60
9650.043143000	3x#4 (7/W) (21.2 mm²)	45	1.14	3x#14 (7/W) (2.08 mm²)	30	0.76	0.71	18.0	0.93	23.6	50	1.27	1.04	26.4	0.86	707	1,052	95
9650.043144000	3x#4 (7/W) (21.2 mm²)	45	1.14	4x#14 (7/W) (2.08 mm²)	30	0.76	0.71	18.0	0.93	23.6	50	1.27	1.04	26.4	0.86	727	1,082	95
9650.043123000	3x#4 (7/W) (21.2 mm²)	45	1.14	3x#12 (7/W) (3.31 mm²)	30	0.76	0.71	18.0	0.93	23.6	50	1.27	1.04	26.4	0.86	727	1,082	95
9650.043124000	3x#4 (7/W) (21.2 mm²)	45	1.14	4x#12 (7/W) (3.31 mm²)	30	0.76	0.75	19.1	0.97	24.6	50	1.27	1.08	27.4	0.93	768	1,143	95
9650.044143000	4x#4 (7/W) (21.2 mm²)	45	1.14	3x#14 (7/W) (2.08 mm²)	30	0.76	0.81	20.6	1.06	26.9	50	1.27	1.17	29.7	1.09	899	1,338	76
9650.044144000	4x#4 (7/W) (21.2 mm²)	45	1.14	4x#14 (7/W) (2.08 mm²)	30	0.76	0.81	20.6	1.06	26.9	50	1.27	1.17	29.7	1.09	929	1,383	76
9650.044123000	4x#4 (7/W) (21.2 mm²)	45	1.14	3x#12 (7/W) (3.31 mm²)	30	0.76	0.81	20.6	1.06	26.9	50	1.27	1.17	29.7	1.09	929	1,383	76
9650.044124000	4x#4 (7/W) (21.2 mm²)	45	1.14	4x#12 (7/W) (3.31 mm²)	30	0.76	0.81	20.6	1.06	26.9	50	1.27	1.17	29.7	1.09	960	1,429	76
9650.023143000	3x#2 (7/W) (33.6 mm²)	45	1.14	3x#14 (7/W) (2.08 mm²)	30	0.76	0.81	20.6	1.06	26.9	50	1.27	1.17	29.7	1.09	995	1,481	130
9650.023144000	3x#2 (7/W) (33.6 mm²)	45	1.14	4x#14 (7/W) (2.08 mm²)	30	0.76	0.81	20.6	1.06	26.9	50	1.27	1.17	29.7	1.09	1,010	1,503	130
9650.023123000	3x#2 (7/W) (33.6 mm²)	45	1.14	3x#12 (7/W) (3.31 mm²)	30	0.76	0.81	20.6	1.06	26.9	50	1.27	1.17	29.7	1.09	1,020	1,518	130
9650.023124000	3x#2 (7/W) (33.6 mm²)	45	1.14	4x#12 (7/W) (3.31 mm²)	30	0.76	0.81	20.6	1.06	26.9	50	1.27	1.17	29.7	1.09	1,050	1,563	130
9650.024143000	4x#2 (7/W) (33.6 mm²)	45	1.14	3x#14 (7/W) (2.08 mm²)	30	0.76	0.90	22.9	1.15	29.2	50	1.27	1.26	32.0	1.26	1,242	1,848	104
9650.024144000	4x#2 (7/W) (33.6 mm²)	45	1.14	4x#14 (7/W) (2.08 mm²)	30	0.76	0.90	22.9	1.15	29.2	50	1.27	1.26	32.0	1.26	1,263	1,880	104
9650.024123000	4x#2 (7/W) (33.6 mm²)	45	1.14	3x#12 (7/W) (3.31 mm²)	30	0.76	0.90	22.9	1.15	29.2	50	1.27	1.26	32.0	1.26	1,273	1,894	104
9650.024124000	4x#2 (7/W) (33.6 mm²)	45	1.14	4x#12 (7/W) (3.31 mm²)	30	0.76	0.90	22.9	1.15	29.2	50	1.27	1.26	32.0	1.26	1,293	1,924	104

Dimensions and weights are nominal; subject to industry tolerances.
[1] Cross-sectional area for cable tray fill is in accordance with NEC Section 392.22.
[2] Ampacities in accordance with NEC Article 310 and Table 310.15(B)(16).

UL LISTED

RoHS Compliant Directive 2011/65/EU

ABS

General Cable