



America's Wire Company

Dear Customer,

We're pleased to provide you with our latest product catalog featuring many cables stocked in our warehouse located in Austin, Texas plus a backup inventory of products available from more than 50 top manufacturers!

For more than 27 years **USA Wire & Cable, Inc.** has been an industry-leading wire and cable distributor for specialty industrial wire and cable. As a master distributor we are very proud of our team of sales managers, which has more than 250 years of combined industry knowledge and experience.

USA Wire & Cable, Inc. inventories *only* America-made wire and cable from top manufacturers, including Okonite, General Cable, Southwire, Service Wire and Nexans, just to name a few. Our inventory is managed by a computerized system that provides our sales staff with instantaneous information down to the precise length of cable footage, description of cable type and the actual location in our multiple warehouses.

Thanks to our Cable Management Services, you can rest assured that *everything* is taken care of upfront for your industrial project needs – from initial planning, specification review, lock-in copper, pre-purchase of bulk material, staging of material indoors, packaging and shipping the material to the jobsite. The cable will arrive on time anywhere in the world – cut to circuit length, labeled and ready for installation!

Please take a look at our latest catalog and give us a call at **800-880-9473** today for your industrial wire and cable needs. We appreciate your business!

Sincerely,

Joe Navarro
President

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America's Wire Company

Cable Management Services

As a master distributor of American-made specialty wire and cable, USA Wire & Cable is uniquely qualified to handle any industrial products you or your customers may have involving instrumentation, thermocouple, control tray, power tray, single conductor, power, MC-HL armored and MV-105 power cable.

A large portion of our service for project support normally includes some level of Cable Management. A Cable Management Program can vary in scope from a simple logistics package to a highly integrated bundle of services.

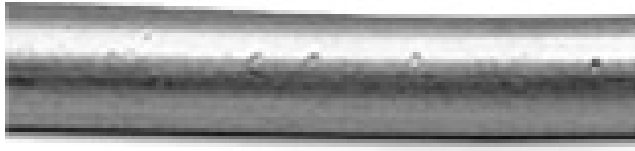
USA Wire & Cable defines in detail each possible component that can be combined to tailor a custom package for any project your customers may have. Our package may contain any or all of the following:

- **Lock-in copper** – Uncertainty of copper fluctuations can be firmed on day of order.
- **Specification clarification and interpretation** – We have many years of experience in the technical evaluation and formation of wire and cable specifications. Since we represent a wide range of manufacturers, we can offer unbiased assistance to make sure your specifications are up to date and that the materials furnished meet or exceed your customers' expectations. In addition, we can assist with value-added engineering with a selection of alternative constructions to decrease overall project costs.
- **Prepurchase of bulk wire and cable for project needs** – Under contract we can acquire all cable items needed for a particular project, insuring that delivery schedules can be met with no guesswork. Cable requirement changes can be accomplished seamlessly throughout the project. In most cable management scenarios, cable is not invoiced to you or your customer until it is released to the job site.
- **Storage** – Cable is stored indoors at our facility, at the job site or near the job site as project requirements dictate.
- **Packaging** – Cable can be released in bulk reels to the job site when specific lengths are not available or, if individual pull requirements are known, cable can be cut to circuit length, wrapped and tagged with circuit and all applicable identifying information. USA Wire & Cable packaging standards are the best in the industry. Your cable arrives at the job site consistently damage free and ready to use, minimizing freight claims and costly reissuing of releases and scheduling of field resources.
- **Shipping** – Your releases are normally shipped via 53-ft. enclosed trucks on LTL or FTL carriers. Upon special request large reels of cable can be shipped in an upright rolling position on a flatbed trailer for easy unloading at the job site. Your cable arrives free of damage and ready to use. Releases ship within 24-48 hours anywhere in the United States.
- **Documentation and reporting** – Throughout the project term we keep you informed with detailed, up-to-the-minute analysis of the cable package in place for your job. By monitoring the cable down to each specific reel, waste can be minimized and usage trends can be identified so that a continuous flow of product is assured throughout the life of your project.
- **End-of-project disposal** – At project's end the remaining product in appropriate lengths can be retained in our inventory with pre-agreed-upon restocking terms. This service eliminates the common practice of job-end random sale or scrapping of leftover cable.

In addition to the above menu of services, USA Wire & Cable can perform any requested task to make your project's wire and cable requirements flow smoothly.

Industries served: Coal-fired • Solar • Natural Gas-fired • Renewable Energy • Petrochemical • Oil & Gas Refining • Air Quality Control • Transmission & Distribution • Chemical Manufacturing

BARE COPPER



- **Solid Conductor**
- **Bare or Tinned**
- **Soft (Annealed)**

APPLICATIONS

For use in electrical grounding systems and on insulators for overhead transmission and distribution applications.

COMPLIANCES

ASTM B3 (soft or annealed), ASTM B33 (tinned soft or annealed)

REA/RUS approved

Federal Standard QQ-W-343

RoHS compliant

USAWC Part #	Size (AWG or MCM)	Nominal Diameter (Inches)	Soft (Annealed) DC Resistance (Ohms/1000 ft.) @ 20°C		Approx. Net Wt. (lbs./1000 ft.)
			Bare	Tinned	
USA8-01SOLSDBC	8	.1285	.6281	.6426	50.0
USA6-01SOLSDBC	6	.1620	.3952	.4109	79.4
USA4-01SOLSDBC	4	.2043	.2485	.2528	126.4
USA2-01SOLSDBC	2	.2576	.1563	.1580	200.9

BARE COPPER



- **Stranded Conductor**
- **Bare or Tinned**
- **Soft (Annealed)**

APPLICATIONS

For use in electrical grounding systems and on insulators for overhead transmission and distribution applications. Stranded conductors offer greater flexibility than solid.

COMPLIANCES

ASTM B3 (soft or annealed), ASTM B8 (concentric lay stranded), ASTM B33 (tinned soft or annealed), ASTM B787 (combination strand)

REA/RUS approved

Federal Standard QQ-W-343

RoHS compliant

USAWC Part #	Size (AWG or MCM)	Strand (No.)	Nominal Diameter (Inches)	Soft Drawn DC Resistance (Ohms/1000 ft.) @ 20°C		Approx. Net Wt. (lbs./1000 ft.)
				Bare	Tinned	
USA14-01STRSDBC	14	7	.0726	2.5800	2.6800	12.7
USA12-01STRSDBC	12	7	.0915	1.6200	1.6900	20.2
USA10-01STRSDBC	10	7	.1160	1.0200	1.0600	32.0
USA8-01STRSDBC	8	7	.1460	.6408	.6654	50.9
USA6-01STRSDBC	6	7	.1840	.4030	.4196	81.0
USA4-01STRSDBC	4	7	.2320	.2540	.2637	128.9
USA2-01STRSDBC	2	7	.2920	.1594	.1657	204.9
USA1-01STRSDBC	1	19	.3320	.1265	.1313	258.4
USA1/0-01STRSDBC	1/0	19	.3730	.1003	.1043	325.8
USA2/0-01STRSDBC	2/0	19	.4190	.0795	.0826	410.9
USA3/0-01STRSDBC	3/0	19	.4700	.0631	.0655	518.1
USA4/0-01STRSDBC	4/0	19	.5280	.0500	.0515	653.3
USA250-01STRSDBC	250	37	.575	.0423	.0440	771.9
USA350-01STRSDBC	350	37	.681	.0302	.0314	1081.0
USA500-01STRSDBC	500	37	.813	.0212	.0218	1544.0
USA750-01STRSDBC	750	61	.998	.0141	.0145	2316.0
USA1000-01STRSDBC	1000	61	1.152	.0106	.0109	3088.0

SINGLE CONDUCTOR



- **Type THW-2**
- **VW-1**
- **600V**

PRODUCT CONSTRUCTION

Conductor: Single copper conductor, stranded.

Insulation: Resistant to sunlight, moisture, heat and flame.

Jacket: Polyvinyl chloride compound. Temperature rating 90°C in wet and dry locations. All sizes pass the vertical flame test (VW-1). Colors available.

APPLICATIONS

Suitable for use in conduit or other recognized raceways for services, feeders and branch circuit wiring. Also suitable for general purpose grounding for power and distribution circuits in residential, industrial and commercial buildings.

COMPLIANCES

ASTM B3 (soft or annealed), ASTM B8 (concentric lay stranded), ASTM B33

UL 83

Federal spec A-A-59544, 90°C wet/dry

CT use 1/0 and larger

Oil resistant I

Sunlight resistant (black only)

NEMA WC70/ICEA S-95-658

RoHS compliant

USAWC Part #	Size (AWG or MCM)	Strand (No.)	Insulation Thickness (Mils)	Nominal Diameter Overall (Inches)	Approx. Net Wt. (lbs./1000 ft.)	Ampacity* 90°C Wet/Dry
USA14-01THW-2	14	7	30	.133	19	35†
USA12-01THW-2	12	7	30	.152	28	40†
USA10-01THW-2	10	7	30	.176	41	55†
USA8-01THW-2	8	7	45	.236	68	80
USA6-01THW-2	6	7	60	.304	109	105
USA4-01THW-2	4	7	60	.352	163	140
USA3-01THW-2	3	7	60	.380	199	165
USA2-01THW-2	2	7	60	.412	245	190
USA1-01THW-2	1	19	80	.481	320	220
USA1/0-01THW-2	1/0	19	80	.520	393	260
USA2/0-01THW-2	2/0	19	80	.564	485	300
USA3/0-01THW-2	3/0	19	80	.614	599	350
USA4/0-01THW-2	4/0	19	80	.670	743	405
USA250-01THW-2	250	37	95	.765	893	455
USA300-01THW-2	300	37	95	.819	1057	505
USA350-01THW-2	350	37	95	.871	1221	570
USA400-01THW-2	400	37	95	.918	1384	615
USA500-01THW-2	500	37	95	1.003	1708	700
USA600-01THW-2	600	61	110	1.113	2062	780
USA750-01THW-2	750	61	110	1.218	2547	885
USA1000-01THW-2	1000	61	110	1.372	3351	1055

*Based on ambient temperature of 30°C Per NEC Table 310-17.

†Overcurrent protection shall not exceed 15 amps for 14 AWG, 20 amps for 12 AWG and 30 amps for 10 AWG per NEC 310-17 footnote.

NOTE: The data shown is approximate and subject to standard industry tolerances.

SINGLE CONDUCTOR



► **XHHW-2**
 ► **XLP**
 ► **600V**

PRODUCT CONSTRUCTION

Conductor: Single copper conductor, stranded.

Insulation: Resistant to moisture, heat and flame.

Jacket: Chemically cross-linked polyethylene. Temperature rating 90°C in wet and dry locations. Colors available.

APPLICATIONS

Suitable for general purpose wiring, power distribution and branch circuit wiring where a cable with superior flame retardance is required. Also suitable for use in low leakage circuits requiring a dielectric constant of 3.5 or less (hospital grade).

COMPLIANCES

ASTM B3, ASTM B8

UL 44, ICEA S-95-658/NEMA WC70

Federal spec A-A-59544, 90°C wet/dry

CT use 1/0 and larger

Gasoline and oil resistant II

C(UL)US RW90: CSA/UL listed

Sunlight resistant

-40°C rated, suitable for use in 105°C dry system

RoHS compliant

USAWC Part #	Size AWG or MCM	Strand (No.)	Insulation Thickness (Mils)	Nominal Diameter Overall (Inches)	Approx. Net Wt. (lbs./1000 ft.)	Ampacity* 90°C Wet/Dry
USA14-01XHHW-2	14	7	30	.133	17	35 [†]
USA12-01XHHW-2	12	7	30	.152	26	40 [†]
USA10-01XHHW-2	10	7	30	.176	39	55 [†]
USA8-01XHHW-2	8	7	45	.236	63	80
USA6-01XHHW-2	6	7	45	.274	96	105
USA4-01XHHW-2	4	7	45	.322	147	140
USA3-01XHHW-2	3	7	45	.350	182	165
USA2-01XHHW-2	2	7	45	.382	226	190
USA1-01XHHW-2	1	19	55	.431	287	220
USA1/0-01XHHW-2	1/0	19	55	.470	358	260
USA2/0-01XHHW-2	2/0	19	55	.514	446	300
USA3/0-01XHHW-2	3/0	19	55	.564	557	350
USA4/0-01XHHW-2	4/0	19	55	.620	697	405
USA250-01XHHW-2	250	37	65	.705	830	455
USA300-01XHHW-2	300	37	65	.759	989	505
USA350-01XHHW-2	350	37	65	.811	1148	570
USA400-01XHHW-2	400	37	65	.858	1306	615
USA500-01XHHW-2	500	37	65	.943	1623	700
USA600-01XHHW-2	600	61	80	1.053	1961	780
USA750-01XHHW-2	750	61	80	1.158	2435	885

*Per NEC Table 310-17.

[†]Overcurrent protection shall not exceed 15 amps for 14 AWG, 20 amps for 12 AWG and 30 amps for 10 AWG per NEC 310-17 footnote.

NOTE: The data shown is approximate and subject to standard industry tolerances.

SINGLE CONDUCTOR



- ▶ **XHHW-2**
- ▶ **XLP**
- ▶ **VW-1**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: Single copper conductor, stranded.

Insulation: Resistant to moisture, heat and flame.

Jacket: Chemically cross-linked polyethylene. Temperature rating 90°C in wet and dry locations. All sizes pass the vertical flame test (VW-1). Colors available.

APPLICATIONS

Suitable for general purpose wiring, power distribution and branch circuit wiring where a cable with superior flame retardance is required. Also suitable for use in low leakage circuits requiring a dielectric constant of 3.5 or less (hospital grade).

COMPLIANCES

ASTM B3, ASTM B8 (concentric lay stranded), ASTM B787

UL 44, ICEA S-95-658/NEMA WC70

Federal spec A-A-59544, 90°C wet/dry

CT use 1/0 and larger

IEEE 1202/FT4

Gasoline and oil resistant II

C(UL)US RW90:CSA/UL listed

Sunlight resistant (#14-#8: black only)

-40°C rated, suitable for use in 105°C dry system

RoHS compliant

USAWC Part #	Size (AWG or MCM)	Strand (No.)	Insulation Thickness (Mils)	Nominal Diameter Overall (Inches)	Approx. Net Wt. (lbs./1000 ft.)	Ampacity* 90°C Wet/Dry
USA14-01XLPVW1	14	7	30	.133	18	35 [†]
USA12-01XLPVW1	12	7	30	.152	27	40 [†]
USA10-01XLPVW1	10	7	30	.176	40	55 [†]
USA8-01XLPVW1	8	7	45	.236	66	80
USA6-01XLPVW1	6	7	45	.274	99	105
USA4-01XLPVW1	4	7	45	.322	152	140
USA3-01XLPVW1	3	7	45	.350	187	165
USA2-01XLPVW1	2	7	45	.382	233	190
USA1-01XLPVW1	1	19	55	.431	293	220
USA1/0-01XLPVW1	1/0	19	55	.470	364	260
USA2/0-01XLPVW1	2/0	19	55	.514	457	300
USA3/0-01XLPVW1	3/0	19	55	.564	570	350
USA4/0-01XLPVW1	4/0	19	55	.620	710	405
USA250-01XLPVW1	250	37	65	.705	848	455
USA300-01XLPVW1	300	37	65	.759	1007	500
USA350-01XLPVW1	350	37	65	.811	1170	570
USA400-01XLPVW1	400	37	65	.858	1327	615
USA500-01XLPVW1	500	37	65	.943	1648	700
USA600-01XLPVW1	600	61	80	1.053	1991	780
USA750-01XLPVW1	750	61	80	1.158	2469	885

*Per NEC Table 310-17.

[†]Overcurrent protection shall not exceed 15 amps for 14 AWG, 20 amps for 12 AWG and 30 amps for 10 AWG per NEC 310-17 footnote.

NOTE: The data shown is approximate and subject to standard industry tolerances.

SINGLE CONDUCTOR



- **USE-2**
- **RHH or RHW-2**
- **600V**

PRODUCT CONSTRUCTION

Conductor: Single, stranded copper

Insulation: Moisture-, heat- and flame-resistant, chemically cross-linked polyethylene insulation. All sizes pass the vertical flame test (VW-1). Temperature rating 90°C in wet and dry locations. Available in colors.

APPLICATIONS

For use in general purpose wiring applications. May be installed in conduit, raceway, aerial and direct burial installation where a cable with superior flame retardance is required. Also suitable for use in low leakage circuits requiring a dielectric constant of 3.5 or less (hospital grade).

COMPLIANCES

ASTM B3, B8, B787. Listed by UL as Type XHHW-2 per Standard 44. Listed by UL as Gasoline and Oil Resistant II. UL Direct Burial. Cables are UL listed as Sunlight Resistant (14-8AWG, black only). For CT use/IEEE 1202/FT4 size 1/0 AWG and larger. C(UL) RPV90 600V. C(UL) US RW90 1kV:CSA/UL Listed. UL 44 and UL 854, IEC S-95-658/NEMA WC70, Federal spec. A-A-59544. -40°C rated. Suitable for use in 105°C dry system. RoHS compliant.

USAWC Part #	Size (AWG or kcmil)	No. of Strands	Insulation Thickness (Mils)	Nom. Diam. (Inches)	Net Weight (lbs./1000 ft.)	Ampacity* 90°C Wet/Dry
USA14-01USE2	14	7	45	.163	22	35†
USA12-01USE2	12	7	45	.182	31	40†
USA10-01USE2	10	7	45	.206	45	55†
USA8-01USE2	8	7	60	.266	73	80
USA6-01USE2	6	7	60	.304	107	105
USA4-01USE2	4	7	60	.352	160	140
USA3-01USE2	3	7	60	.380	197	165
USA2-01USE2	2	7	60	.412	243	190
USA1-01USE2	1	19	80	.481	316	220
USA1/0-01USE2	1/0	19	80	.520	390	260
USA2/0-01USE2	2/0	19	80	.564	481	300
USA3/0-01USE2	3/0	19	80	.614	596	350
USA4/0-01USE2	4/0	19	80	.670	739	405
USA250-01USE2	250	37	95	.765	885	455
USA300-01USE2	300	37	95	.819	1049	500
USA350-01USE2	350	37	95	.871	1212	570
USA400-01USE2	400	37	95	.918	1374	615
USA500-01USE2	500	37	95	1.003	1697	700
USA600-01USE2	600	61	110	1.113	2049	780
USA750-01USE2	750	61	110	1.218	2532	885

*Per NEC Table 310-17.

†Overcurrent protection shall not exceed 15 amps for 14AWG, 20 amps for 12AWG and 30 amps for 10AWG per NEC 310-17 footnote.

NOTE: Data shown is approximate and subject to standard industry tolerances.

SINGLE CONDUCTOR



- **RHH/RHW-2**
- **USE-2**
- **EPR/XL-CPE**
- **600V**

PRODUCT CONSTRUCTION

Conductor: 14 AWG through 1000 kcmil tin-coated, copper, compressed, Class B stranding per ASTM B33 and B8

Insulation: Lead-free, ethylene propylene rubber (EPR) colored to contrast with black, lead-free cross-linked chlorinated polyethylene (XL-CPE) jacket.

Options: Colored jackets available; 2kV-rated cables.

APPLICATIONS

Ideally suited for use in a broad range of commercial, industrial and utility applications where reliability is a concern and maximum performance is demanded.

For use in free air, raceways and direct burial.

For use in aerial, conduit, open tray and underground installations.

FEATURES

Resistant to water and sunlight. Designed to withstand severe environmental conditions. Withstands exposure to oil, acids, alkalies, heat, flame, moisture and chemicals. Meets or exceeds flame test requirements of MSHA and UL.

COMPLIANCES

Industry: ICEA S-95-658, NEMA WC70. For CT use on 1/0 and larger in accordance with the NEC[®]. UL 44 Type RHH/RHW-2, UL File #E90494, UL 854, Type USE-2, UL File #E90499.

Flame Test: UL 1581 VW-1, IEEE 1202/CSA FT4.

Other: EPA 40 CFR, Part 261 for leachable lead content per TCLP; OSHA acceptable; RoHS compliant.

USAWC Part #	Size (AWG or kcmil)	Cond. Strand	Nominal Cond. Diameter		Min. Avg. Insulation				Min. Avg. Jacket				Copper Weight		Net Weight	
					Thickness		Diameter		Thickness		Diameter					
			(Inches)	(mm)	(Inches)	(mm)	(Inches)	(mm)	(Inches)	(mm)	(Inches)	(mm)	(lbs./100	kg/km	(lbs./1000	kg/km
14 AWG – 1000 kcmil Conductors																
USA14-01EPR-CPE	14	7/.0242	0.07	1.78	0.030	0.76	0.14	3.56	0.015	0.38	0.17	4.32	13	19	24	36
USA12-01EPR-CPE	12	7/.0305	0.09	2.29	0.030	0.76	0.16	4.06	0.015	0.38	0.19	4.83	20	30	33	49
USA10-01EPR-CPE	10	7/.0385	0.12	3.05	0.030	0.76	0.18	4.57	0.015	0.38	0.21	5.33	32	48	48	71
USA8-01EPR-CPE	8	7/.0486	0.15	3.81	0.045	1.14	0.24	6.10	0.015	0.38	0.28	7.11	50	75	77	115
USA6-01EPR-CPE	6	7/.0612	0.18	4.57	0.045	1.14	0.28	7.11	0.030	0.76	0.35	8.89	81	121	122	182
USA4-01EPR-CPE	4	7/.0772	0.23	5.84	0.045	1.14	0.33	8.38	0.030	0.76	0.39	9.91	129	192	178	265
USA2-01EPR-CPE	2	7/.0974	0.29	7.37	0.045	1.14	0.39	9.91	0.030	0.76	0.46	11.68	205	305	265	394
USA1/0-01EPR-CPE	1/0	19/.0740	0.37	9.40	0.055	1.40	0.48	12.19	0.045	1.14	0.58	14.73	326	485	422	628
USA2/0-01EPR-CPE	2/0	19/.0837	0.41	10.41	0.055	1.40	0.53	13.46	0.045	1.14	0.63	16.00	411	612	518	771
USA4/0-01EPR-CPE	4/0	19/.1055	0.52	13.21	0.055	1.40	0.64	16.26	0.045	1.14	0.74	18.80	653	972	785	1168
USA250-01EPR-CPE	250	37/.0822	0.56	14.22	0.065	1.65	0.70	17.78	0.065	1.65	0.85	21.59	772	1149	960	1429
USA350-01EPR-CPE	350	37/.0973	0.67	17.02	0.065	1.65	0.81	20.57	0.065	1.65	0.96	24.38	1081	1609	1299	1933
USA500-01EPR-CPE	500	37/.1162	0.80	20.32	0.065	1.65	0.94	23.88	0.065	1.65	1.09	27.69	1542	2295	1803	2683
USA750-01EPR-CPE	750	61/.1109	0.98	24.89	0.080	2.03	1.15	29.21	0.065	1.65	1.31	33.27	2316	3447	2664	3965
USA1000-01EPR-CPE	1000	61/.1280	1.13	28.70	0.080	2.03	1.31	33.27	0.065	1.65	1.46	37.08	3086	4593	3989	5936

NOTE: Dimensions and weights are nominal and are subject to industry tolerances.

SINGLE CONDUCTOR



- **Cathodic Protection**
- **HMW-PE**
- **600V**

PRODUCT CONSTRUCTION

Conductor: Soft, annealed, stranded copper per ASTM B8.

Insulation: Black, high molecular weight polyethylene (HMW-PE) per ASTM D1248.

Temperature: 75°C

Voltage: 600V

APPLICATIONS

Suitable for direct burial for use in cathodic protection systems for pipelines, storage tanks, pilings, well casings, cables and other buried or water-submerged metallic structures.

COMPLIANCES

ICEA S-61-402

Suitable for direct burial

Resistant to chemicals, oil, moisture and sunlight

Crush and abrasion resistant

RoHS compliant

USAWC Part #	Conductor		Nominals (inches)			Standard Put-up (reels)	Nominal DC Resistance Ohms/1000 ft. @ 25°C	Product Weight (lbs./1000 ft.)
	AWG	Strand	Cond. O.D.	Insulation	O.D.			
USA8-01HMW-PE	8	7	.143	.110	.37	2,500', 5,000'	.652	87
USA6-01HMW-PE	6	7	.182	.110	.40	5,000'	.411	122
USA4-01HMW-PE	4	7	.229	.110	.45	5,000'	.258	175
USA2-01HMW-PE	2	7	.290	.110	.51	1,000', 5,000'	.162	260
USA1-01HMW-PE	1	19	.326	.125	.58	2,500'	.129	330
USA1/0-01HMW-PE	1/0	19	.367	.125	.62	2,000'	.102	400
USA2/0-01HMW-PE	2/0	19	.410	.125	.66	2,000'	.081	495
USA4/0-01HMW-PE	4/0	19	.526	.125	.77	2,000'	.051	750
USA250-01HMW-PE	250	37	.575	.140	.86	1,000'	.043	900
USA350-01HMW-PE	350	37	.681	.140	.96	1,000'	.031	1229

All diameters are nominal values. All weights are product weights exclusive of packaging. All diameters and weights are subject to normal manufacturing tolerances.

CONTROL CABLE



- ▶ **Multi-Conductor**
- ▶ **PE/PVC**
- ▶ **PVC**
- ▶ **20/10 Control**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 14 AWG. Bare, annealed copper per ASTM B3 and B8, concentric 7 strand. Concentric 19 strand available.

Insulation: 20 mils transparent, linear, low-density polyethylene

Jacket: (Conductor) 10 mils color-coded PVC; (Overall) black direct burial PVC with thickness per ICEA S-73-532

APPLICATIONS

For use as a general control cable for conveying signals between devices interfaced daily with the electrical power system. Suitable for open air ducuts or conduit, tray and direct burial installation with a maximum voltage of 600V and operating temperature of 75°.

FEATURES

Polyethylene insulated, PVC jacketed conductors cabled together with an overall PVC jacket. Lead-free, flame-retardant and sunlight-resistant jacket.

COMPLIANCES

ICEA S-73-532

#14 AWG-7 Strand

USAWC Part #	Number of Conductors	Overall PVC Jacket Mils	Nom. Diam. Inches	Weight lbs./1000 ft	
				Net	Copper
USA14-02 20/10	2 Flat	45	.23 x .37	65	25
USA14-03 20/10	3	45	.39	90	38
USA14-04 20/10	4	45	.43	110	51
USA14-05 20/10	5	45	.47	135	64
USA14-06 20/10	6	45	.51	155	78
USA14-07 20/10	7	45	.51	170	90
USA14-08 20/10	8	60	.59	215	104
USA14-09 20/10	9	60	.62	245	116
USA14-10 20/10	10	60	.68	260	130
USA14-11 20/10	11	60	.68	280	143
USA14-12 20/10	12	60	.70	295	154
USA14-13 20/10	13	60	.71	320	169
USA14-14 20/10	14	60	.73	335	182
USA14-15 20/10	15	60	.77	370	195
USA14-16 20/10	16	60	.77	380	208
USA14-17 20/10	17	60	.81	405	221
USA14-18 20/10	18	60	.81	420	234
USA14-19 20/10	19	60	.81	435	244
USA14-20 20/10	20	80	.90	490	260
USA14-23 20/10	23	80	.94	575	299
USA14-25 20/10	25	80	.99	605	325
USA14-27 20/10	27	80	1.01	665	351
USA14-29 20/10	29	80	1.02	705	377
USA14-31 20/10	31	80	1.07	750	403
USA14-32 20/10	32	80	1.09	775	416
USA14-37 20/10	37	80	1.13	840	481

*Dimensions and weights are nominal; subject to industry tolerances.

CONTROL CABLE



- ▶ **Multi-Conductor**
- ▶ **PE/PVC**
- ▶ **PVC**
- ▶ **20/10 Control**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 12 AWG. Bare, annealed copper per ASTM B3 and B8, concentric 7 strand. Concentric 19 strand available.

Insulation: 20 mils transparent, linear, low-density polyethylene

Jacket: (Conductor) 10 mils color-coded PVC; (Overall) black direct burial PVC with thickness per ICEA S-73-532

APPLICATIONS

For use as a general control cable for conveying signals between devices interfaced daily with the electrical power system. Suitable for open air ducuts or conduit, tray and direct burial installation with a maximum voltage of 600V and operating temperature of 75°.

FEATURES

Polyethylene insulated, PVC jacketed conductors cabled together with an overal PVC jacket. Lead-free, flame-retardant and sunlight-resistant jacket.

COMPLIANCES

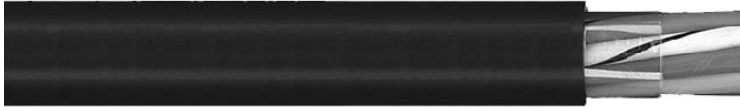
ICEA S-73-532

#12 AWG-7 Strand

USAWC Part #	Number of Conductors	Overall PVC Jacket Mils	Nom. Diam. Inches	Weight lbs./1000 ft	
				Net	Copper
USA12-02 20/10	2 Flat	45	.25 x .41	80	40
USA12-03 20/10	3	45	.43	120	61
USA12-04 20/10	4	45	.48	150	81
USA12-05 20/10	5	45	.52	180	102
USA12-06 20/10	6	60	.60	220	126
USA12-07 20/10	7	60	.60	250	143
USA12-08 20/10	8	60	.65	290	168
USA12-09 20/10	9	60	.69	330	184
USA12-10 20/10	10	60	.75	360	210
USA12-11 20/10	11	60	.75	385	231
USA12-12 20/10	12	60	.78	405	245
USA12-13 20/10	13	60	.79	445	273
USA12-14 20/10	14	60	.82	470	294
USA12-15 20/10	15	80	.90	550	315
USA12-16 20/10	16	80	.90	560	336
USA12-17 20/10	17	80	.95	610	357
USA12-18 20/10	18	80	.95	625	378
USA12-19 20/10	19	80	.95	640	388
USA12-20 20/10	20	80	1.00	685	420
USA12-23 20/10	23	80	1.04	775	483
USA12-25 20/10	25	80	1.11	840	525
USA12-27 20/10	27	80	1.13	900	567
USA12-29 20/10	29	80	1.14	950	609
USA12-31 20/10	31	80	1.19	1015	651
USA12-32 20/10	32	80	1.21	1055	672
USA12-37 20/10	37	80	1.26	1210	777

*Dimensions and weights are nominal; subject to industry tolerances.

CONTROL CABLE



- ▶ **Multi-Conductor**
- ▶ **PE/PVC**
- ▶ **PVC**
- ▶ **20/10 Control**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 10 AWG. Bare, annealed copper per ASTM B3 and B8, concentric 7 strand. Concentric 19 strand available.

Insulation: 20 mils transparent, linear, low-density polyethylene

Jacket: (Conductor) 10 mils color-coded PVC; (Overall) black direct burial PVC with thickness per ICEA S-73-532

APPLICATIONS

For use as a general control cable for conveying signals between devices interfaced daily with the electrical power system. Suitable for open air ducuts or conduit, tray and direct burial installation with a maximum voltage of 600V and operating temperature of 75°.

FEATURES

Polyethylene insulated, PVC jacketed conductors cabled together with an overall PVC jacket. Lead-free, flame-retardant and sunlight-resistant jacket.

COMPLIANCES

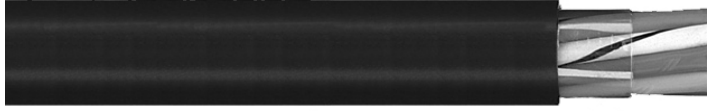
ICEA S-73-532

#10 AWG-7 Strand

USAWC Part #	Number of Conductors	Overall PVC Jacket Mils	Nom. Diam. Inches	Weight lbs./1000 ft	
				Net	Copper
USA10-02 20/10	2 Flat	45	.28 x .46	115	64
USA10-03 20/10	3	45	.49	165	97
USA10-04 20/10	4	60	.57	230	129
USA10-05 20/10	5	60	.62	280	162
USA10-06 20/10	6	60	.67	320	192
USA10-07 20/10	7	60	.67	355	227
USA10-08 20/10	8	60	.73	415	256
USA10-09 20/10	9	60	.79	475	292
USA10-10 20/10	10	80	.89	535	320
USA10-11 20/10	11	80	.89	580	352
USA10-12 20/10	12	80	.92	615	389
USA10-13 20/10	13	80	.94	670	416
USA10-14 20/10	14	80	.97	710	448
USA10-15 20/10	15	80	1.02	760	480
USA10-16 20/10	16	80	1.02	800	512
USA10-17 20/10	17	80	1.07	870	544
USA10-18 20/10	18	80	1.07	895	576
USA10-19 20/10	19	80	1.07	920	616
USA10-20 20/10	20	80	1.13	980	640
USA10-23 20/10	23	80	1.18	1125	736
USA10-25 20/10	25	80	1.26	1250	800
USA10-27 20/10	27	80	1.28	1330	864
USA10-29 20/10	29	80	1.30	1370	928
USA10-31 20/10	31	80	1.36	1510	992
USA10-32 20/10	32	80	1.38	1565	1024
USA10-37 20/10	37	80	1.44	1755	1184

*Dimensions and weights are nominal; subject to industry tolerances.

TRAY CABLE



- ▶ **Multi-Conductor**
- ▶ **PVC/Nylon**
- ▶ **PVC**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 16 AWG fully annealed, stranded, bare copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Flame-retardant Polyvinyl Chloride (PVC) with clear Polyamide (nylon). Color-coded per ICEA Method 1, Table E2 (does not include white or green).

Jacket: Lead-free, flame-retardant, sunlight-resistant Polyvinyl Chloride (PVC).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC. Permitted for Exposed Run (ER) use in accordance with NEC for three or more conductors.

FEATURES

Rated at 90°C dry, 75° wet. Provides outstanding sunlight, cold bend and cold impact resistance. Provides good oil and chemical resistance. Meets cold bend text at -25°C.

COMPLIANCES

Industry: UL 1277 Type TC-ER for three or more conductors. ICEA S-73-532/NEMA WC57. UL 1581.

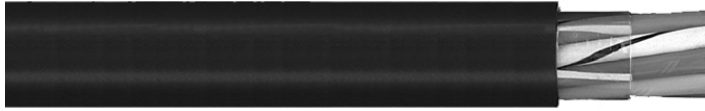
Flame Test: UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable. RoHS compliant.

#16 AWG-7 Strand

USAWC Part #	No. of Conductors	Overall PVC Jacket (Mils)	Nom. Diam. (Inches)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)
USA16-02VNTC	2	45	.20 x .30	40	20
USA16-03VNTC	3	45	.32	60	24
USA16-04VNTC	4	45	.34	75	32
USA16-05VNTC	5	45	.37	85	40
USA16-06VNTC	6	45	.40	100	48
USA16-07VNTC	7	45	.40	110	56
USA16-09VNTC	9	45	.47	140	72
USA16-10VNTC	10	45	.51	155	80
USA16-12VNTC	12	60	.55	200	97
USA16-15VNTC	15	60	.61	240	121
USA16-16VNTC	16	60	.61	250	128
USA16-19VNTC	19	60	.64	285	153
USA16-20VNTC	20	60	.67	305	160
USA16-25VNTC	25	60	.74	370	201
USA16-37VNTC	37	80	.89	550	306

TRAY CABLE



- ▶ **Multi-Conductor**
- ▶ **PVC/Nylon**
- ▶ **PVC**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 14 AWG fully annealed, stranded, bare copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Flame-retardant Polyvinyl Chloride (PVC) with clear Polyamide (nylon). Color-coded per ICEA Method 1, Table E2 (does not include white or green).

Jacket: Lead-free, flame-retardant, sunlight-resistant Polyvinyl Chloride (PVC).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC. Permitted for Exposed Run (ER) use in accordance with NEC for three or more conductors.

FEATURES

Rated at 90°C dry, 75° wet. Provides outstanding sunlight, cold bend and cold impact resistance. Provides good oil and chemical resistance. Meets cold bend text at -25°C.

COMPLIANCES

Industry: UL 1277 Type TC-ER for three or more conductors. ICEA S-73-532/NEMA WC57. UL 1581.

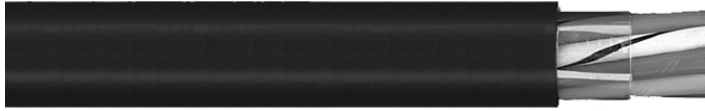
Flame Test: UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable. RoHS compliant.

#14 AWG-7 Strand

USAWC Part #	No. of Conductors	Overall PVC Jacket (Mils)	Nom. Diam. (Inches)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)
USA14-02VNTC	2	45	.21 x .33	55	26
USA14-03VNTC	3	45	.34	75	39
USA14-03VNGTC	3w/g	45	.35	92	52
USA14-04VNTC	4	45	.37	100	52
USA14-05VNTC	5	45	.41	115	65
USA14-06VNTC	6	45	.44	140	78
USA14-07VNTC	7	45	.44	150	90
USA14-09VNTC	9	45	.51	195	116
USA14-10VNTC	10	60	.58	220	130
USA14-12VNTC	12	60	.60	265	155
USA14-15VNTC	15	60	.66	310	195
USA14-16VNTC	16	60	.66	340	208
USA14-19VNTC	19	60	.70	390	245
USA14-20VNTC	20	60	.73	415	260
USA14-25VNTC	25	80	.85	540	323
USA14-37VNTC	37	80	.96	755	478

TRAY CABLE



- ▶ **Multi-Conductor**
- ▶ **PVC/Nylon**
- ▶ **PVC**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 12 AWG fully annealed, stranded, bare copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Flame-retardant Polyvinyl Chloride (PVC) with clear Polyamide (nylon). Color-coded per ICEA Method 1, Table E2 (does not include white or green).

Jacket: Lead-free, flame-retardant, sunlight-resistant Polyvinyl Chloride (PVC).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC. Permitted for Exposed Run (ER) use in accordance with NEC for three or more conductors.

FEATURES

Rated at 90°C dry, 75° wet. Provides outstanding sunlight, cold bend and cold impact resistance. Provides good oil and chemical resistance. Meets cold bend text at -25°C.

COMPLIANCES

Industry: UL 1277 Type TC-ER for three or more conductors. ICEA S-73-532/NEMA WC57. UL 1581.

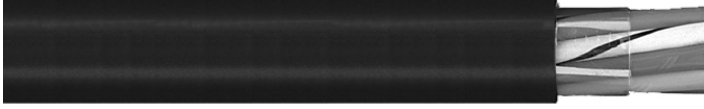
Flame Test: UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable. RoHS compliant.

#12 AWG-7 Strand

USAWC Part #	No. of Conductors	Overall PVC Jacket (Mils)	Nom. Diam. (Inches)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)
USA12-02VNTC	2	45	.23 x .37	75	41
USA12-03VNTC	3	45	.36	105	63
USA12-03VNGTC	3w/g	45	.40	130	86
USA12-04VNTC	4	45	.40	135	86
USA12-05VNTC	5	45	.45	165	108
USA12-06VNTC	6	45	.50	195	126
USA12-07VNTC	7	45	.50	215	144
USA12-09VNTC	9	60	.62	300	185
USA12-10VNTC	10	60	.66	325	210
USA12-12VNTC	12	60	.68	375	247
USA12-15VNTC	15	60	.76	455	315
USA12-16VNTC	16	60	.76	485	336
USA12-19VNTC	19	60	.79	565	391
USA12-20VNTC	20	80	.89	590	420
USA12-25VNTC	25	80	.96	770	515
USA12-37VNTC	37	80	1.10	1090	762

TRAY CABLE



- ▶ **Multi-Conductor**
- ▶ **PVC/Nylon**
- ▶ **PVC**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 10 AWG fully annealed, stranded, bare copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Flame-retardant Polyvinyl Chloride (PVC) with clear Polyamide (nylon). Color-coded per ICEA Method 1, Table E2 (does not include white or green).

Jacket: Lead-free, flame-retardant, sunlight-resistant Polyvinyl Chloride (PVC).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC. Permitted for Exposed Run (ER) use in accordance with NEC for three or more conductors.

FEATURES

Rated at 90°C dry, 75° wet. Provides outstanding sunlight, cold bend and cold impact resistance. Provides good oil and chemical resistance. Meets cold bend text at -25°C.

COMPLIANCES

Industry: UL 1277 Type TC-ER for three or more conductors. ICEA S-73-532/NEMA WC57. UL 1581.

Flame Test: UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable. RoHS compliant.

#10 AWG-7 Strand

USAWC Part #	No. of Conductors	Overall PVC Jacket (Mils)	Nom. Diam. (Inches)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)
USA10-02 VNTC	2	45	.26 x.43	110	65
USA10-03 VNTC	3	45	.46	155	98
USA10-03VNGTC	3w/g	45	.47	194	131
USA10-04VNTC	4	45	.50	200	135
USA10-05VNTC	5	60	.58	265	169
USA10-06VNTC	6	60	.63	315	192
USA10-07VNTC	7	60	.63	345	236
USA10-09VNTC	9	60	.73	450	295
USA10-10VNTC	10	60	.81	500	320
USA10-12VNTC	12	60	.82	580	404
USA10-15VNTC	15	80	.95	745	480
USA10-16VNTC	16	80	.95	810	512
USA10-19VNTC	19	80	1.02	940	608
USA10-20VNTC	20	80	1.07	990	640
USA10-25VNTC	25	80	1.19	1210	800
USA10-37VNTC	37	80	1.36	1710	1184

TRAY CABLE



- ▶ **3C w/Ground**
- ▶ **PVC/Nylon**
- ▶ **PVC**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 8 AWG through 1000 kcmil bare, annealed copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Flame-retardant Polyvinyl Chloride (PVC) with clear Polyamide (nylon). Color-coded per ICEA Method 4; individual conductors colored black with conductor number surface printed in contrasting ink.

Jacket: Lead-free, flame-retardant, sunlight-resistant Polyvinyl Chloride (PVC).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC. Permitted for Exposed Run (ER) use in accordance with NEC for three or more conductors.

FEATURES

Rated at 90°C dry, 75° wet. Provides outstanding sunlight, cold bend and cold impact resistance. Provides good oil and chemical resistance.

Meets cold bend text at -25°C.

COMPLIANCES

Industry: NEC Type THHN/THWN conductors. UL 1277 Type TC-ER, UL 1581. ICEA S-95-658/NEMA WC70.

Flame Test: UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable. RoHS compliant.

Three Conductors With Grounding Conductor

USAWC Part #	Size (AWG or kcmil)	No. of Strands	Thickness in Mils			Nominal Diameter (Inches)	Grounding Conductor Size' (AWG)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)	Ampacity*	
			PVC Insulation	Nylon Jacket	Overall PVC Jacket					90°C Dry	75°C Wet
USA8-03VNGTC	8	7	30	5	60	.62	10	315	189	55	50
USA6-03VNGTC	6	7	30	5	60	.70	8	445	300	75	65
USA4-03VNGTC	4	7	40	6	80	.88	8	675	446	95	85
USA2-03VNGTC	2	7	40	6	80	1.01	6	995	710	130	115
USA1-03VNGTC	1	19	50	7	80	1.14	6	1200	855	150	130
USA1/0-03VNGTC	1/0	19	50	7	80	1.23	6	1480	1080	170	150
USA2/0-03VNGTC	2/0	19	50	7	80	1.32	6	1770	1340	195	175
USA3/0-03VNGTC	3/0	19	50	7	80	1.43	4	2180	1683	225	200
USA4/0-03VNGTC	4/0	19	50	7	80	1.56	4	2690	2130	260	230
USA250-03VNGTC	250	37	60	8	110	1.76	4	3225	2494	290	255
USA350-03VNGTC	350	37	60	8	110	1.98	3	4370	3474	350	310
USA500-03VNGTC	500	37	60	8	110	2.26	2	5960	4934	430	380
USA750-03VNGTC	750	61	70	9	110	2.71	1	9050	7206	535	475
USA1000-03VNGTC	1000	61	70	9	140	3.10	1/0	11720	9584	615	545

*AMPACITY in accordance with the NEC for cables in uncovered cable tray without maintained spacing and for cables in raceway or directly buried; 90°C conductor temperature for dry locations, 75°C conductor temperature for wet locations, 30°C ambient temperature.

TRAY CABLE



- ▶ **4C w/Ground**
- ▶ **PVC/Nylon**
- ▶ **PVC**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 8 AWG through 500 kcmil bare, annealed copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Flame-retardant Polyvinyl Chloride (PVC) with clear Polyamide (nylon). Color-coded per ICEA Method 4; individual conductors colored black with conductor number surface printed in contrasting ink.

Jacket: Lead-free, flame-retardant, sunlight-resistant Polyvinyl Chloride (PVC).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC. Permitted for Exposed Run (ER) use in accordance with NEC for three or more conductors.

FEATURES

Rated at 90°C dry, 75° wet. Provides outstanding sunlight, cold bend and cold impact resistance. Provides good oil and chemical resistance.

Meets cold bend text at -25°C.

COMPLIANCES

Industry: NEC Type THHN/THWN conductors. UL 1277 Type TC-ER, UL 1581. ICEA S-95-658/NEMA WC70.

Flame Test: UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable. RoHS compliant.

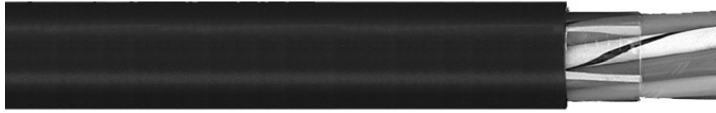
Four Conductors With Grounding Conductor

USAWC Part #	Size (AWG or kcmil)	No. of Strands	Thickness in MILS			Nominal Diameter (Inches)	Grounding Conductor Size ¹ (AWG)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)	Ampacity*	
			PVC Insulation	Nylon Jacket	Overall PVC Jacket					90°C Dry	75°C Wet
USA8-04VNGTC	8	7	30	5	60	.66	10	373	241	55	50
USA6-04VNGTC	6	7	30	5	60	.76	8	533	383	75	65
USA4-04VNGTC	4	7	40	6	80	.97	8	824	578	95	85
USA2-04VNGTC	2	7	40	6	80	1.10	6	1227	919	130	115
USA1/0-04VNGTC	1/0	19	50	7	80	1.36	6	1830	1413	170	150
USA2/0-04VNGTC	2/0	19	50	7	80	1.46	6	2252	1760	195	175
USA4/0-04VNGTC	4/0	19	50	7	80	1.77	4	3502	2796	260	230
USA250-04VNGTC	250	37	60	8	110	1.95	4	4107	3281	290	255
USA350-04VNGTC	350	37	60	8	110	2.19	3	5585	4586	350	310
USA500-04VNGTC	500	37	60	8	110	2.51	2	7694	6509	430	380

*AMPACITY in accordance with the NEC for cables in uncovered cable tray without maintained spacing and for cables in raceway or directly buried;
90°C conductor temperature for dry locations, 75°C conductor temperature for wet locations, 30°C ambient temperature.

¹NOTE: Grounding conductor per UL Standard 1277 for Type TC Tray Cable.

TRAY CABLE



- ▶ **Multi-Conductor**
- ▶ **XLP**
- ▶ **PVC**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 16 AWG fully annealed, stranded, bare copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Flame-retardant Cross-linked Polyethylene (XLP). Color-coded per ICEA Method 1, Table E-2 (does not include white or green).

Jacket: Lead-free, flame-retardant, sunlight-resistant Polyvinyl Chloride (PVC).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC.

Permitted for Exposed Run (ER) use in accordance with NEC for three or more conductors.

FEATURES

Rated at 90°C dry, 75° wet. Excellent electrical properties. Abrasion- and chemical-resistant. Sunlight- and weather-resistant. Meets cold bend test at -25°C.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC-ER for three or more conductors. UL 1581. ICEA S-73-532/NEMA WC57.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. ICEA T-29-520 (210,000 BTU/hr). CSA FT4.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

#16 AWG-7 Strand

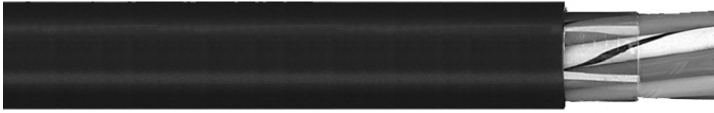
USAWC Part #	No. of Conductors	Overall PVC Jacket (Mils)	Nom. Diam. (Inches)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)
USA16-02XPTC	2	45	.23 x .35	65	16
USA16-03XPTC	3	45	.37	70	22
USA16-04XPTC	4	45	.39	87	29
USA16-05XPTC	5	45	.44	105	37
USA16-06XPTC	6	45	.48	120	44
USA16-07XPTC	7	45	.48	140	51
USA16-08XPTC	8	45	.51	155	59
USA16-09XPTC	9	45	.58	200	66
USA16-10XPTC	10	60	.63	230	74
USA16-11XPTC	11	60	.63	240	81
USA16-12XPTC	12	60	.67	255	88
USA16-13XPTC	13	60	.67	270	96
USA16-14XPTC	14	60	.68	290	103
USA16-15XPTC	15	60	.71	315	110
USA16-16XPTC	16	60	.71	325	118
USA16-17XPTC	17	60	.75	350	125
USA16-18XPTC	18	60	.75	360	132
USA16-19XPTC	19	60	.75	370	140
USA16-20XPTC	20	60	.79	400	147
USA16-23XPTC	23	60	.82	450	169
USA16-25XPTC	25	80	.91	530	184
USA16-27XPTC	27	80	.93	560	199
USA16-29XPTC	29	80	.94	585	213
USA16-31XPTC	31	80	.98	625	228
USA16-32XPTC	32	80	.99	650	235
USA16-37XPTC	37	80	1.03	720	272

Notes: 1. Cables designated (w/g) contain an additional bare copper grounding conductor, same size as circuit conductors, and are UL listed.

2. Standard color coding is Method E-2 of ICEA S-72-532. This color coding method omits white and green from the color sequence.

A white or green conductor can be supplied on request, Method E-1.

TRAY CABLE



- ▶ **Multi-Conductor**
- ▶ **XLP**
- ▶ **PVC**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 14 AWG fully annealed, stranded, bare copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Flame-retardant Cross-linked Polyethylene (XLP). Color-coded per ICEA Method 1, Table E-2 (does not include white or green).

Jacket: Lead-free, flame-retardant, sunlight-resistant Polyvinyl Chloride (PVC).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC.

Permitted for Exposed Run (ER) use in accordance with NEC for three or more conductors.

FEATURES

Rated at 90°C dry, 75° wet. Excellent electrical properties. Abrasion- and chemical-resistant. Sunlight- and weather-resistant. Meets cold bend test at -25°C.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC-ER for three or more conductors. UL 1581. ICEA S-73-532/NEMA WC57.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. ICEA T-29-520 (210,000 BTU/hr). CSA FT4.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

#14 AWG-7 Strand

USAWC Part #	No. of Conductors	Overall PVC Jacket (Mils)	Nom. Diam. (Inches)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)
USA14-02XPTC	2	45	.23 x .37	65	25
USA14-03XPTC	3	45	.39	90	40
USA14-03WGXPTC	3+ Grnd	45	.42	110	53
USA14-04XPTC	4	45	.43	113	53
USA14-05XPTC	5	45	.47	137	66
USA14-06XPTC	6	45	.51	160	78
USA14-07XPTC	7	45	.51	180	93
USA14-09XPTC	9	60	.63	250	119
USA14-10XPTC	10	60	.69	270	130
USA14-12XPTC	12	60	.70	310	159
USA14-15XPTC	15	60	.78	380	195
USA14-16XPTC	16	60	.78	400	208
USA14-19XPTC	19	60	.82	460	252
USA14-20XPTC	20	80	.90	525	260
USA14-25XPTC	25	80	1.00	640	323
USA14-37XPTC	37	80	1.14	890	490

TRAY CABLE



- ▶ **Multi-Conductor**
- ▶ **XLP**
- ▶ **PVC**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 12 AWG fully annealed, stranded, bare copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Flame-retardant Cross-linked Polyethylene (XLP). Color-coded per ICEA Method 1, Table E-2.

Jacket: Lead-free, flame-retardant, sunlight-resistant Polyvinyl Chloride (PVC).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC.

Permitted for Exposed Run (ER) use in accordance with NEC for three or more conductors.

FEATURES

Rated at 90°C dry, 75° wet. Excellent electrical properties. Abrasion- and chemical-resistant. Sunlight- and weather-resistant. Meets cold bend test at -25°C.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC-ER for three or more conductors. UL 1581. ICEA S-73-532/NEMA WC57.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. ICEA T-29-520 (210,000 BTU/hr). CSA FT4.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

#12 AWG-7 Strand

USAWC Part #	No. of Conductors	Overall PVC Jacket (Mils)	Nom. Diam. (Inches)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)
USA12-02XPTC	2	45	.25 x .41	85	41
USA12-03XPTC	3	45	.44	120	65
USA12-03XPGTC	3 w/g	45	.44	143	86
USA12-04XPTC	4	45	.48	154	86
USA12-05XPTC	5	45	.53	190	108
USA12-06XPTC	6	60	.60	235	126
USA12-07XPTC	7	60	.60	265	150
USA12-09XPTC	9	60	.70	340	193
USA12-10XPTC	10	60	.77	370	210
USA12-12XPTC	12	60	.79	430	258
USA12-15XPTC	15	80	.92	535	315
USA12-16XPTC	16	80	.92	570	336
USA12-19XPTC	19	80	.96	675	403
USA12-20XPTC	20	80	1.01	710	420
USA12-25XPTC	25	80	1.12	890	515
USA12-37XPTC	37	80	1.28	1310	741

Note: Cables designated (w/g) contain an additional bare copper grounding conductor, same size as circuit conductors, and are UL listed

TRAY CABLE



- ▶ **Multi-Conductor**
- ▶ **XLP**
- ▶ **PVC**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 10 AWG fully annealed, stranded, bare copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Flame-retardant Cross-linked Polyethylene (XLP). Color-coded per ICEA Method 1, Table E-2 (does not include white or green).

Jacket: Lead-free, flame-retardant, sunlight-resistant Polyvinyl Chloride (PVC).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC.

Permitted for Exposed Run (ER) use in accordance with NEC for three or more conductors.

FEATURES

Rated at 90°C dry, 75° wet. Excellent electrical properties. Abrasion- and chemical-resistant. Sunlight- and weather-resistant. Meets cold bend test at -25°C.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC-ER for three or more conductors. UL 1581. ICEA S-73-532/NEMA WC57.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. ICEA T-29-520. CSA FT4.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

#10 AWG-7 Strand

USAWC Part #	No. of Conductors	Overall PVC Jacket (Mils)	Nom. Diam. (Inches)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)
USA10-02XPTC	2	45	.28 x.46	117	67
USA10-03XPTC	3	45	.49	167	101
USA10-03XPGTC	3 w/g	45	.49	205	135
USA10-04XPTC	4	60	.57	230	135
USA10-05XPTC	5	60	.62	280	167
USA10-06XPTC	6	60	.67	325	192
USA10-07XPTC	7	60	.67	370	234
USA10-09XPTC	9	60	.79	455	295
USA10-10XPTC	10	80	.90	550	320
USA10-12XPTC	12	80	.93	640	402
USA10-15XPTC	15	80	1.03	775	480
USA10-16XPTC	16	80	1.03	820	512
USA10-19XPTC	19	80	1.08	965	608
USA10-20XPTC	20	80	1.14	1010	640
USA10-25XPTC	25	80	1.26	1235	800
USA10-37XPTC	37	80	1.44	1775	1184

Note: Cables designated (w/g) contain an additional bare copper grounding conductor, same size as circuit conductors, and are UL listed

TRAY CABLE



- **3C w/Ground**
- **XLP**
- **PVC**
- **Type TC-ER**
- **600V**

PRODUCT CONSTRUCTION

Conductor: 8 AWG through 1000 kcmil bare, annealed copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Flame-retardant Cross-linked Polyethylene (XLP). Color-coded per ICEA Method 4; individual conductors colored black with conductor number surface printed in contrasting ink.

Jacket: Lead-free, flame-retardant, sunlight-resistant Polyvinyl Chloride (PVC).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC. Permitted for Exposed Run (ER) use in accordance with NEC.

FEATURES

Rated at 90°C wet or dry. Excellent electrical properties. Abrasion- and chemical-resistant. Sunlight- and weather-resistant. Meets cold bend test at -25°C.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC-ER. UL 1581. ICEA S-95-658/NEMA WC70.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. ICEA T-29-520. CSA FT4.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

Three Conductors With Grounding Conductor

USAWC Part #	Size AWG or kcmil	No. of Strands	Thickness in Mils		Nominal Diameter (Inches)	Grounding Conductor Size (AWG)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)	Ampacity*	
			Insulation	Jacket					90°C	75°C
USA8-03XPGTC	8	7	45	60	.66	10	325	190	55	50
USA6-03XPGTC	6	7	45	60	.74	8	450	301	75	65
USA4-03XPGTC	4	7	45	80	.88	8	655	448	95	85
USA2-03XPGTC	2	7	45	80	1.00	6	960	716	130	115
USA1-03XPGTC	1	19	55	80	1.13	6	1170	872	150	130
USA1/0-03XPGTC	1/0	19	55	80	1.22	6	1435	1081	170	150
USA2/0-03XPGTC	2/0	19	55	80	1.31	6	1730	1341	195	175
USA3/0-03XPGTC	3/0	19	55	80	1.42	4	2150	1717	225	200
USA4/0-03XPGTC	4/0	19	55	80	1.55	4	2620	2132	260	230
USA250-03XPGTC	250	37	65	110	1.76	4	3180	2494	290	255
USA350-03XPGTC	350	37	65	110	1.98	3	4290	3474	350	310
USA500-03XPGTC	500	37	65	110	2.26	2	5940	4938	430	380
USA750-03XPGTC	750	61	80	110	2.71	1	8660	7278	535	475
USA1000-03XPGTC	1000	61	80	140	3.10	1/0	11700	9590	615	545

*AMPACITY in accordance with the NEC for cables in uncovered cable tray without maintained spacing and for cables in raceway or directly buried; at the conductor temperature indicated, in wet or dry locations, 30°C ambient temperature.

TRAY CABLE



- **4C w/Ground**
- **XLP**
- **PVC**
- **Type TC-ER**
- **600V**

PRODUCT CONSTRUCTION

Conductor: 8 AWG through 750 kcmil bare, annealed copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Flame-retardant Cross-linked Polyethylene (XLP). Color-coded per ICEA Method 4; individual conductors colored black with conductor number surface printed in contrasting ink.

Jacket: Lead-free, flame-retardant, sunlight-resistant Polyvinyl Chloride (PVC).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC. Permitted for Exposed Run (ER) use in accordance with NEC.

FEATURES

Rated at 90°C wet or dry. Excellent electrical properties. Abrasion- and chemical-resistant. Sunlight- and weather-resistant. Meets cold bend test at -25°C.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC-ER. UL 1581. ICEA S-95-658/NEMA WC70.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. ICEA T-29-520. CSA FT4.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

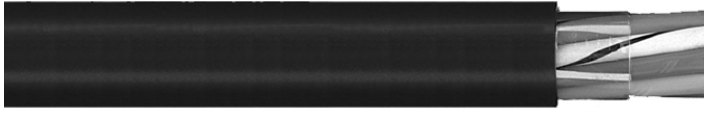
Four Conductors With Grounding Conductor

USAWC Part #	Size AWG or kcmil	No. of Strands	Thickness in Mils		Nominal Diameter (Inches)	Grounding Conductor Size (AWG)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)	Ampacity*	
			Insulation	Jacket					90°C	75°C
USA8-04XPGTC	8	7	45	60	.72	12	415	242	44	40
USA6-04XPGTC	6	7	45	60	.81	10	575	384	60	52
USA4-04XPGTC	4	7	45	80	.96	10	840	578	76	68
USA2-04XPGTC	2	7	45	80	1.10	9	1200	919	104	92
USA1-04XPGTC	1	19	55	80	1.25	9	1545	1136	120	104
USA1/0-04XPGTC	1/0	19	55	80	1.35	9	1835	1413	136	120
USA2/0-04XPGTC	2/0	19	55	80	1.45	9	2195	1760	156	140
USA3/0-04XPGTC	3/0	19	55	80	1.58	7	2800	2245	180	160
USA4/0-04XPGTC	4/0	19	55	80	1.77	7	3460	2796	208	184
USA250-04XPGTC	250	37	65	110	1.93	7	4040	3282	232	204
USA350-04XPGTC	350	37	65	110	2.18	6	5475	4577	280	248
USA500-04XPGTC	500	37	65	110	2.50	5	7635	6509	344	304
USA750-04XPGTC	750	61	80	140	3.12	4	11400	9712	428	380

*AMPACITY in accordance with the NEC for cables in uncovered cable tray without maintained spacing and for cables in raceway or directly buried; at the conductor temperature indicated, in wet or dry locations, 30°C ambient temperature.

NOTES: (1) Grounding conductor per UL Standard 1277 for Type TC Tray Cable. (2) Cables with Open Wiring listing available upon request.

TRAY CABLE



- ▶ **Multi-Conductor**
- ▶ **FR-XLP**
- ▶ **CPE**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 14 AWG fully annealed, stranded, tinned copper per ASTM B33. Class B stranding per ASTM B8.

Insulation: Flame-retardant Cross-linked Polyethylene (XLP). Color-coded per ICEA Method 1, Table E2 (does not include white or green).

Jacket: Lead-free Chlorinated Polyethylene (CPE).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations For use in Class 1, Division 2 industrial hazardous locations per NEC Article 501 and Class 1 circuits per NEC.

FEATURES

Rated at 90°C wet or dry. Excellent physical, thermal and electrical properties. Excellent resistance to moisture and flame. Sunlight- and weather-resistant. Meets cold bend test at -35°C.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC. UL 1581. ICEA S-73-532/NEMA WC57.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4. ICEA T-29-520.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

#14 AWG-7 Strand

USAWC Part #	No. of Conductors	Overall Jacket (Mils)	Nom. Diam. (Inches)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)
USA14-02XLPCPETC	2	45	.23 x.37	65	25
USA14-03XLPCPETC	3	45	.39	90	40
USA14-03WGXLPCPETC	3+ Grnd	45	.39	109	53
USA14-04XLPCPETC	4	45	.43	113	53
USA14-05XLPCPETC	5	45	.47	137	66
USA14-07XLPCPETC	7	45	.51	180	93
USA14-09XLPCPETC	9	60	.63	250	119
USA14-10XLPCPETC	10	60	.69	270	130
USA14-12XLPCPETC	12	60	.70	310	159
USA14-16XLPCPETC	16	60	.78	400	208
USA14-19XLPCPETC	19	60	.82	460	252
USA14-20XLPCPETC	20	80	.90	525	260
USA14-25XLPCPETC	25	80	1.00	640	323
USA14-37XLPCPETC	37	80	1.14	890	490

TRAY CABLE



- ▶ **Multi-Conductor**
- ▶ **FR-XLP**
- ▶ **CPE**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 12 AWG fully annealed, stranded, tinned copper per ASTM B33. Class B stranding per ASTM B8.

Insulation: Flame-retardant Cross-linked Polyethylene (XLP). Color-coded per ICEA Method 1, Table E2 (does not include white or green).

Jacket: Lead-free Chlorinated Polyethylene (CPE).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations For use in Class 1, Division 2 industrial hazardous locations per NEC Article 501 and Class 1 circuits per NEC.

FEATURES

Rated at 90°C wet or dry. Excellent physical, thermal and electrical properties. Excellent resistance to moisture and flame. Sunlight- and weather-resistant. Meets cold bend test at -35°C.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC. UL 1581. ICEA S-73-532/NEMA WC57.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4. ICEA T-29-520.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

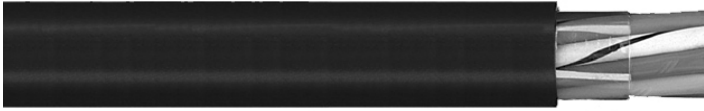
#12 AWG-7 Strand

USAWC Part #	No. of Conductors	Overall Jacket (Mils)	Nom. Diam. (Inches)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)
USA12-02XLPCPETC	2	45	.25x.41	85	41
USA12-03XLPCPETC	3	45	.44	120	65
USA12-04XLPCPETC	4	45	.48	154	86
USA12-05XLPCPETC	5	45	.53	190	108
USA12-07XLPCPETC	7	60	.60	265	150
USA12-09XLPCPETC	9	60	.70	340	193
USA12-10XLPCPETC	10	60	.77	370	210
USA12-12XLPCPETC	12	60	.79	430	258
USA12-16XLPCPETC	16	80	.92	570	336
USA12-19XLPCPETC	19	80	.96	675	403
USA12-20XLPCPETC	20	80	1.01	710	420
USA12-25XLPCPETC	25	80	1.12	890	515
USA12-37XLPCPETC	37	80	1.28	1310	741

Notes: 1. All cables available with bare or covered grounding indicator.

2. Standard color coding is ICEA Method E-2 for NEC applications per ICEA S-73-532. This color coding method omits white and green from the color sequence. A white or green conductor can be supplied on request, Method E-1.

TRAY CABLE



- ▶ **Multi-Conductor**
- ▶ **FR-XLP**
- ▶ **CPE**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 10 AWG fully annealed, stranded, tinned copper per ASTM B33. Class B stranding per ASTM B8.

Insulation: Flame-retardant Cross-linked Polyethylene (XLP). Color-coded per ICEA Method 1, Table E2 (does not include white or green).

Jacket: Lead-free Chlorinated Polyethylene (CPE).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations For use in Class 1, Division 2 industrial hazardous locations in accordance with the NEC for three or more conductors.

FEATURES

Rated at 90°C wet or dry. Excellent physical, thermal and electrical properties. Excellent resistance to moisture and flame. Sunlight- and weather-resistant. Meets cold bend test at -35°C.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC. UL 1581. ICEA S-73-532/NEMA WC57.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4. ICEA T-29-520.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

#10 AWG-7 Strand

USAWC Part #	No. of Conductors	Overall Jacket (Mils)	Nom. Diam. (Inches)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)
USA10-02XLPCPETC	2	45	.28 x.46	117	67
USA10-03XLPCPETC	3	45	.49	167	101
USA10-04XLPCPETC	4	60	.57	230	135
USA10-05XLPCPETC	5	60	.62	280	167
USA10-07XLPCPETC	7	60	.67	370	234
USA10-09XLPCPETC	9	60	.79	455	295
USA10-10XLPCPETC	10	80	.90	550	320
USA10-12XLPCPETC	12	80	.93	640	402
USA10-16XLPCPETC	16	80	1.03	820	512
USA10-19XLPCPETC	19	80	1.08	965	608
USA10-20XLPCPETC	20	80	1.14	1010	640
USA10-25XLPCPETC	25	80	1.26	1235	800
USA10-37XLPCPETC	37	80	1.44	1775	1184

Notes: 1. All cables available with bare or covered grounding indicator.

2. Standard color coding is ICEA Method E-2 for NEC applications per ICEA S-73-532. This color coding method omits white and green from the color sequence. A white or green conductor can be supplied on request, Method E-1.

TRAY CABLE



- ▶ **3C w/Ground**
- ▶ **FR-XLP**
- ▶ **CPE**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 8 AWG through 1000 kcmil tinned, annealed copper per ASTM B33. Class B stranding per ASTM B8.

Insulation: Flame-retardant Cross-linked Polyethylene (XLPE). Color-coded per ICEA Method 4; individual conductors colored black with conductor number surface printed in contrasting ink.

Jacket: Lead-free Chlorinated Polyethylene (CPE).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC Article 501 and Class 1 circuits per NEC. Permitted for Exposed Run (ER) use in accordance with NEC for 2 AWG and larger.

FEATURES

Rated at 90°C wet or dry. Excellent physical, thermal and electrical properties. Excellent resistance to moisture and flame. Sunlight- and weather-resistant. Meets cold bend test at -35°C. Meets crush and impact requirements of Type MC Cable for 2AWG and larger.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC-ER for 2 AWG and larger. UL 1581. ICEA S-95-658/NEMA WC70.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4. ICEA T-29-520.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

Three Conductors With Grounding Conductor

USAWC Part #	Size AWG or kcmil	No. of Strands	Thickness in Mils		Nominal Diameter (Inches)	Grounding Conductor Size (AWG)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)	Ampacity*	
			Insulation	Jacket					90°C	75°C
USA8-03XLPGCPETC	8	7	45	60	.66	10	335	190	55	50
USA6-03XLPGCPETC	6	7	45	60	.74	8	475	301	75	65
USA4-03XLPGCPETC	4	7	45	80	.88	8	700	448	95	85
USA2-03XLPGCPETC	2	7	45	80	1.00	6	1020	716	130	115
USA1-03XLPGCPETC	1	19	55	80	1.13	6	1260	872	150	130
USA1/0-03XLPGCPETC	1/0	19	55	80	1.22	6	1520	1081	170	150
USA2/0-03XLPGCPETC	2/0	19	55	80	1.31	6	1825	1341	195	175
USA3/0-03XLPGCPETC	3/0	19	55	80	1.42	4	2210	1717	225	200
USA4/0-03XLPGCPETC	4/0	19	55	80	1.55	4	2690	2132	260	230
USA250-03XLPGCPETC	250	37	65	110	1.76	4	3265	2494	290	255
USA350-03XLPGCPETC	350	37	65	110	1.98	3	4465	3474	350	310
USA500-03XLPGCPETC	500	37	65	110	2.26	2	6100	4938	430	380
USA750-03XLPGCPETC	750	61	80	110	2.71	1	9060	7206	535	475
USA1000-03XLPGCPETC	1000	61	80	140	3.10	1/0	11770	9590	615	545

*AMPACITY in accordance with the NEC for cables in uncovered cable tray without maintained spacing and for cables in raceway or directly buried; 90°C conductor temperature for dry locations, 75°C conductor temperature for wet locations, 30°C ambient temperature.

NOTE: Grounding conductor per UL Standard 1277 for Type TC Tray Cable.

TRAY CABLE



- ▶ **4C w/Ground**
- ▶ **FR-XLP**
- ▶ **CPE**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 8 AWG through 750 kcmil tinned, annealed copper per ASTM B33. Class B stranding per ASTM B8.

Insulation: Flame-retardant Cross-linked Polyethylene (XLPE). Color-coded per ICEA Method 4; individual conductors colored black with conductor number surface printed in contrasting ink.

Jacket: Lead-free Chlorinated Polyethylene (CPE).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC Article 501 and Class 1 circuits per NEC. Permitted for Exposed Run (ER).

FEATURES

Rated at 90°C wet or dry. Excellent physical, thermal and electrical properties. Excellent resistance to moisture and flame. Sunlight- and weather-resistant. Meets cold bend test at -35°C. Meets crush and impact requirements of Type MC Cable for 2AWG and larger.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC-ER for 2 AWG and larger. UL 1581. ICEA S-95-658/NEMA WC70.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4. ICEA T-29-520.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

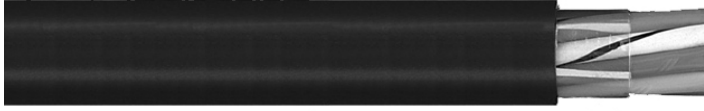
Four Conductors With Grounding Conductor

USAWC Part #	Size AWG or kcmil	No. of Strands	Thickness in Mils		Nominal Diameter (Inches)	Grounding Conductor Size (AWG)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)	Ampacity*	
			Insulation	Jacket					90°C	75°C
USA8-04XLPGCPETC	8	7	45	60	.71	10	385	242	55	50
USA6-04XLPGCPETC	6	7	45	60	.79	8	558	384	75	65
USA4-04XLPGCPETC	4	7	45	80	.95	8	820	578	95	85
USA2-04XLPGCPETC	2	7	45	80	1.10	6	1214	919	130	115
USA1-04XLPGCPETC	1	19	55	80	1.24	6	1704	1136	150	130
USA1/0-04XLPGCPETC	1/0	19	55	80	1.34	6	1825	1413	170	150
USA2/0-04XLPGCPETC	2/0	19	55	80	1.45	6	2223	1760	195	175
USA3/0-04XLPGCPETC	3/0	19	55	80	1.57	4	3123	2245	225	200
USA4/0-04XLPGCPETC	4/0	19	55	80	1.77	4	3444	2796	260	230
USA250-04XLPGCPETC	250	37	65	110	1.93	4	4048	3282	290	255
USA350-04XLPGCPETC	350	37	65	110	2.18	3	5470	4577	350	310
USA500-04XLPGCPETC	500	37	65	110	2.48	2	7579	6509	430	380
USA750-04XLPGCPETC	750	61	80	110	3.12	1	11746	9522	535	475

*AMPACITY in accordance with the NEC for cables in uncovered cable tray without maintained spacing and for cables in raceway or directly buried; 90°C conductor temperature for dry locations, 75°C conductor temperature for wet locations, 30°C ambient temperature.

NOTE: Grounding conductor per UL Standard 1277 for Type TC Tray Cable.

TRAY CABLE



- **Multi-Conductor**
- **FR-EPR**
- **CPE**
- **Type TC-ER**
- **600V**

PRODUCT CONSTRUCTION

Conductor: 14 AWG fully annealed, stranded, tinned copper per ASTM B33. Class B stranding per ASTM B8.

Insulation: Flame-retardant Ethylene Propylene Rubber (FR-EPR) Type II. Color-coded per ICEA Method 1, Table E2 (does not include white or green).

Jacket: Lead-free, flame-retardant thermoplastic Chlorinated Polyethylene (CPE).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC. Permitted for Exposed Run (ER) use in accordance with NEC for three or more conductors.

FEATURES

Rated at 90°C wet or dry. Excellent physical, thermal and electrical properties. Excellent resistance to moisture and flame. Sunlight- and weather-resistant. Meets cold bend test at -40°C.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC-ER for three or more conductors. UL 1581. ICEA S-73-532/NEMA WC57.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4. ICEA T-29-520.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

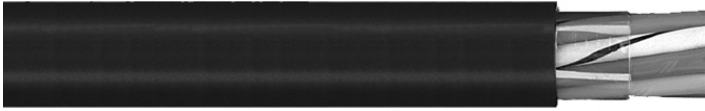
#14 AWG – 7 Strand

USAWC Part #	No. of Conductors	Overall CPE Jacket (Mils)	Nom. Diam. (Inches)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)
USA14-02FREPCPETC	2	45	.25 x.37	65	26
USA14-03FREPCPETC	3	45	.39	90	39
USA14-04FREPCPETC	4	45	.43	113	53
USA14-05FREPCPETC	5	45	.47	137	66
USA14-07FREPCPETC	7	45	.51	180	92
USA14-09FREPCPETC	9	60	.63	250	118
USA14-10FREPCPETC	10	60	.69	270	130
USA14-12FREPCPETC	12	60	.70	310	158
USA14-16FREPCPETC	16	60	.78	400	208
USA14-19FREPCPETC	19	60	.82	460	250
USA14-20FREPCPETC	20	80	.90	525	260
USA14-25FREPCPETC	25	80	1.00	640	323
USA14-37FREPCPETC	37	80	1.14	890	466

Notes: 1. All cables available with bare or covered grounding indicator.

2. Standard color coding is ICEA Method E-2 for NEC applications per ICEA S-73-532. This color coding method omits white and green from the color sequence. A white or green conductor can be supplied on request, Method E-1.

TRAY CABLE



- ▶ **Multi-Conductor**
- ▶ **FR-EPR**
- ▶ **CPE**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 12 AWG fully annealed, stranded, tinned copper per ASTM B33. Class B stranding per ASTM B8.

Insulation: Flame-retardant Ethylene Propylene Rubber (FR-EPR) Type II. Color-coded per ICEA Method 1, Table E2 (does not include white or green).

Jacket: Lead-free, flame-retardant thermoplastic Chlorinated Polyethylene (CPE).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC. Permitted for Exposed Run (ER) use in accordance with NEC for three or more conductors.

FEATURES

Rated at 90°C wet or dry. Excellent physical, thermal and electrical properties. Excellent resistance to moisture and flame. Sunlight- and weather-resistant. Meets cold bend test at -40°C.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC-ER for three or more conductors. UL 1581. ICEA S-73-532/NEMA WC57.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4. ICEA T-29-520.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

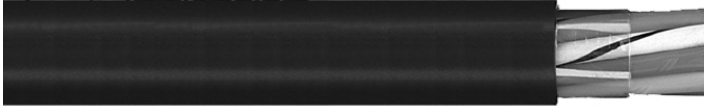
#12 AWG – 7 Strand

USAWC Part #	No. of Conductors	Overall CPE Jacket (Mils)	Nom. Diam. (Inches)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)
USA12-02FREPCPETC	2	45	.25 x .41	85	41
USA12-03FREPCPETC	3	45	.44	120	64
USA12-03WGFREPCPETC	3+ Grnd	45	.44	148	85
USA12-04FREPCPETC	4	45	.48	154	85
USA12-05FREPCPETC	5	45	.53	190	106
USA12-07FREPCPETC	7	60	.60	265	149
USA12-09FREPCPETC	9	60	.70	340	191
USA12-10FREPCPETC	10	60	.77	370	210
USA12-12FREPCPETC	12	60	.79	430	247
USA12-16FREPCPETC	16	80	.92	570	336
USA12-19FREPCPETC	19	80	.96	675	391
USA12-20FREPCPETC	20	80	1.01	710	420
USA12-25FREPCPETC	25	80	1.12	890	515
USA12-37FREPCPETC	37	80	1.28	1310	762

Notes: 1. All cables available with bare or covered grounding indicator.

2. Standard color coding is ICEA Method E-2 for NEC applications per ICEA S-73-532. This color coding method omits white and green from the color sequence. A white or green conductor can be supplied on request, Method E-1.

TRAY CABLE



- ▶ **Multi-Conductor**
- ▶ **FR-EPR**
- ▶ **CPE**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 10 AWG fully annealed, stranded, tinned copper per ASTM B33. Class B stranding per ASTM B8.

Insulation: Flame-retardant Ethylene Propylene Rubber (FR-EPR) Type II. Color-coded per ICEA Method 1, Table E2 (does not include white or green).

Jacket: Lead-free, flame-retardant thermoplastic Chlorinated Polyethylene (CPE).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC. Permitted for Exposed Run (ER) use in accordance with NEC for three or more conductors.

FEATURES

Rated at 90°C wet or dry. Excellent physical, thermal and electrical properties. Excellent resistance to moisture and flame. Sunlight- and weather-resistant. Meets cold bend test at -40°C.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC-ER for three or more conductors. UL 1581. ICEA S-73-532/NEMA WC57.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4. ICEA T-29-520.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

#10 AWG – 7 Strand

USAWC Part #	No. of Conductors	Overall CPE Jacket (Mils)	Nom. Diam. (Inches)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)
USA10-02FREPCPETC	2	45	.28 x .46	117	65
USA10-03FREPCPETC	3	45	.49	167	100
USA10-04FREPCPETC	4	60	.57	230	134
USA10-05FREPCPETC	5	60	.62	280	167
USA10-07FREPCPETC	7	60	.67	370	234
USA10-09FREPCPETC	9	60	.79	455	295
USA10-10FREPCPETC	10	80	.90	550	320
USA10-12FREPCPETC	12	80	.93	640	402
USA10-16FREPCPETC	16	80	1.03	820	512
USA10-19FREPCPETC	19	80	1.08	965	608
USA10-20FREPCPETC	20	80	1.14	1010	640
USA10-25FREPCPETC	25	80	1.26	1235	800
USA10-37FREPCPETC	37	80	1.44	1775	1184

Notes: 1. All cables available with bare or covered grounding indicator.

2. Standard color coding is ICEA Method E-2 for NEC applications per ICEA S-73-532. This color coding method omits white and green from the color sequence. A white or green conductor can be supplied on request, Method E-1.

TRAY CABLE



- **3C w/Ground**
- **FR-EPR**
- **CPE**
- **Type TC-ER**
- **600V**

PRODUCT CONSTRUCTION

Conductor: 8 AWG through 1000 kcmil tinned, annealed copper per ASTM B33. Class B stranding per ASTM B8.

Insulation: Flame-retardant Ethylene Propylene Rubber (FR-EPR) Type II. Color-coded per ICEA Method 4; individual conductors colored black with conductor number surface printed in contrasting ink.

Jacket: Lead-free, flame-retardant thermoplastic Chlorinated Polyethylene (CPE).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC. Permitted for Division 2 industrial hazardous locations per NEC. Permitted for Exposed Run (ER)

FEATURES

Rated at 90°C wet or dry. Excellent physical, thermal and electrical properties. Excellent resistance to moisture and flame. Sunlight- and weather-resistant. Meets cold bend test at -40°C.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC-ER. UL 1581. ICEA S-73-532/NEMA WC57.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4. ICEA T-29-520.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

Three Conductors With Grounding Conductor

USAWC Part #	Size AWG or kcmil	No. of Strands	Thickness in Mils		Nominal Diameter (Inches)	Grounding Conductor Size (AWG)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)	Ampacity*
			Insulation	Jacket					90°C
USA14-03EPGCPETC	14	7	30	45	.39	14	118	55	25
USA12-03EPGCPETC	12	7	30	45	.44	12	160	87	30
USA10-03EPGCPETC	10	7	30	60	.49	10	237	136	40
USA8-03EPGCPETC	8	7	45	60	.66	10	330	190	55
USA6-03EPGCPETC	6	7	45	60	.74	8	460	297	75
USA4-03EPGCPETC	4	7	45	80	.88	8	685	442	95
USA2-03EPGCPETC	2	7	45	80	1.00	6	1015	703	130
USA1-03EPGCPETC	1	19	55	80	1.13	6	1270	872	150
USA1/0-03EPGCPETC	1/0	19	55	80	1.22	6	1500	1069	170
USA2/0-03EPGCPETC	2/0	19	55	80	1.31	6	1810	1340	195
USA3/0-03EPGCPETC	3/0	19	55	80	1.42	4	2250	1717	225
USA4/0-03EPGCPETC	4/0	19	55	80	1.55	4	2685	2130	260
USA250-03EPGCPETC	250	37	65	110	1.76	4	3170	2494	290
USA350-03EPGCPETC	350	37	65	110	1.98	3	4320	3474	350
USA500-03EPGCPETC	500	37	65	110	2.26	2	6020	4934	430
USA750-03EPGCPETC	750	61	80	110	2.71	1	8980	7278	535
USA1000-03EPGCPETC	1000	61	80	140	3.10	1/0	11700	9584	615

*AMPACITY in accordance with the NEC for cables installed in uncovered cable tray without maintained spacing and for cables in raceway or directly buried; at the conductor temperature indicated, 30°C ambient temperature.

NOTES: (1) Grounding conductor per UL Standard 1277 for Type TC Tray Cable. (2) Cables with Open Wiring listing available upon request

TRAY CABLE



- ▶ **4C w/Ground**
- ▶ **FR-EPR**
- ▶ **CPE**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 8 AWG through 750 kcmil tinned, annealed copper per ASTM B33. Class B stranding per ASTM B8.

Insulation: Flame-retardant Ethylene Propylene Rubber (FR-EPR) Type II. Color-coded per ICEA Method 4; individual conductors colored black with conductor number surface printed in contrasting ink.

Jacket: Lead-free, flame-retardant thermoplastic Chlorinated Polyethylene (CPE).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. For use in Class 1, Division 2 industrial hazardous locations per NEC. Permitted for Division 2 industrial hazardous locations per NEC. Permitted for Exposed Run (ER)

FEATURES

Rated at 90°C wet or dry. Excellent physical, thermal and electrical properties. Excellent resistance to moisture and flame. Sunlight- and weather-resistant. Meets cold bend test at -40°C.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC-ER. UL 1581. ICEA S-73-532/NEMA WC57.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4. ICEA T-29-520.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

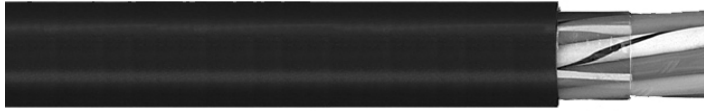
Four Conductors With Grounding Conductor

USAWC Part #	Size AWG or kcmil	No. of Strands	Thickness in Mils		Nominal Diameter (Inches)	Grounding Conductor Size (AWG)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)	Ampacity*	
			Insulation	Jacket					90°C	75°C
USA8-04EPGCPETC	8	7	45	60	.72	10	393	242	55	50
USA6-04EPGCPETC	6	7	45	60	.79	8	561	384	75	65
USA4-04EPGCPETC	4	7	45	80	.95	8	822	578	95	85
USA2-04EPGCPETC	2	7	45	80	1.09	6	1235	919	130	115
USA1-04EPGCPETC	1	19	55	80	1.24	6	1521	1136	150	130
USA1/0-04EPGCPETC	1/0	19	55	80	1.33	6	1820	1413	170	150
USA2/0-04EPGCPETC	2/0	19	55	80	1.44	6	2208	1760	195	175
USA3/0-04EPGCPETC	3/0	19	55	80	1.57	4	2788	2245	225	200
USA4/0-04EPGCPETC	4/0	19	55	80	1.79	4	3495	2796	260	230
USA250-04EPGCPETC	250	37	65	110	1.92	4	4019	3282	290	255
USA350-04EPGCPETC	350	37	65	110	2.17	3	5436	4577	350	310
USA500-04EPGCPETC	500	37	65	110	2.48	2	7607	6509	430	380
USA750-04EPGCPETC	750	61	80	110	3.12	1	11805	9712	535	475

*AMPACITY in accordance with the NEC for cables installed in uncovered cable tray without maintained spacing and for cables in raceway or directly buried; at the conductor temperature indicated, 30°C ambient temperature.

NOTE: Grounding conductor per UL Standard 1277 for Type TC Tray Cable.

TRAY CABLE



- **Multi-Conductor**
- **LS-XLP**
- **LSZH**
- **Type TC-ER**
- **600V**

PRODUCT CONSTRUCTION

Conductor: 14 AWG, 12 AWG or 10AWG stranded bare copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Lead-free, flame-retardant, low-smoke, Cross-linked Polyethylene (XLP). Color-coded per ICEA Method 1, Table E-2 (does not include white or green).

Jacket: Lead-free, flame-retardant, sunlight-resistant, Low-Smoke, Zero-Halogen Polyolefin (LSZH).

APPLICATIONS

In free air, raceways, aerial or direct burial. In wet or dry locations. Permitted for use in Class I, Division 2 industrial hazardous locations per NEC. Permitted for Exposed in Class I, Division 2 industrial hazardous locations per NEC. Permitted for Exposed Run (ER) use in accordance with the NEC for three or more conductors.

FEATURES

Rated at 90°C wet or dry. Ripcord applied to all cables with jacket thickness of 60 mils or less. Excellent physical and electrical properties. Excellent moisture resistance. Excellent resistance to compression and impact. Chemical-resistant. Low coefficient of friction for easy pulling. Sunlight- and weather-resistant. Meets cold bend test at -30°C. Low-Smoke, Zero-Halogen jacket is environmentally safe and reduces the amount of toxic and corrosive gases emitted during combustion.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC-LS-ER. UL 1581. ICEA S-73-532/NEMA WC57. ICEA T-33-655. RoHS compliant.

Flame Test:UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 1202/CSA FT4.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

USAWC Part #	No. of Conductors	Cond. Size (AWG)	Cond. Strand	Insulation Thickness (Inches)	Jacket Thickness (Inches)	Nominal Cable Diameter (Inches)	Copper Weight (lbs./1000 ft.)	Net Weight (lbs./1000 ft.)
14 AWG Multi-Conductors								
USA14-02LSZHTCFL	2 flat	14	7	.030	.045	.365x.230	26	61
USA14-02LSZHTC	2	14	7	.030	.045	.370	26	71
USA14-03LSZHTC	3	14	7	.030	.045	.390	39	92
USA14-03WGLSZHTC	3+ Grnd	14	7	.030	.045	.410	53	105
USA14-04LSZHTC	4	14	7	.030	.045	.425	53	115
USA14-05LSZHTC	5	14	7	.030	.045	.465	66	139
USA14-07LSZHTC	7	14	7	.030	.045	.505	92	173
USA14-09LSZHTC	9	14	7	.030	.060	.620	118	240
USA14-12LSZHTC	12	14	7	.030	.060	.700	158	301
USA14-19LSZHTC	19	14	7	.030	.060	.815	250	468
USA14-25LSZHTC	25	14	7	.030	.080	.935	323	624
USA14-30LSZHTC	30	14	7	.030	.080	1.030	387	747
USA14-37LSZHTC	37	14	7	.030	.080	1.110	466	875
12 AWG Multi-Conductors								
USA12-02LSZHTCFL	2 FLAT	12	7	.030	.045	.400x.245	40	82
USA12-02LSZHTC	2	12	7	.030	.045	.410	41	94
USA12-03LSZHTC	3	12	7	.030	.045	.435	64	124
USA12-03WGLSZHTC	3+ Grnd	12	7	.030	.045	.410	85	148
USA12-04LSZHTC	4	12	7	.030	.045	.475	85	157
USA12-05LSZHTC	5	12	7	.030	.045	.520	106	191
USA12-07LSZHTC	7	12	7	.030	.060	.595	149	268
USA12-09LSZHTC	9	12	7	.030	.060	.695	191	337
USA12-12LSZHTC	12	12	7	.030	.060	.765	247	428
USA12-19LSZHTC	19	12	7	.030	.080	.940	391	688
USA12-25LSZHTC	25	12	7	.030	.080	1.095	515	854
USA12-30LSZHTC	30	12	7	.030	.080	1.150	618	1002
USA12-37LSZHTC	37	12	7	.030	.080	1.240	762	1240
10 AWG Multi-Conductors								
USA10-02LSZHTCFL	2 flat	10	7	.030	.045	.445x.270	64	113
USA10-02LSZHTC	2	10	7	.030	.045	.455	65	128
USA10-03LSZHTC	3	10	7	.030	.045	.485	100	172
USA10-03WGLSZHTC	3+ Grnd	10	7	.030	.045	.485	134	225
USA10-04LSZHTC	4	10	7	.030	.060	.560	134	234
USA10-05LSZHTC	5	10	7	.030	.060	.615	167	284
USA10-07LSZHTC	7	10	7	.030	.060	.670	234	381
USA10-09LSZHTC	9	10	7	.030	.060	.760	295	464
USA10-12LSZHTC	12	10	7	.030	.080	.905	402	651

TRAY CABLE



- ▶ **3C w/Ground**
- ▶ **LS-XLP**
- ▶ **LZSH**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 14 AWG through 750 kcmil bare annealed copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Lead-free, flame-retardant, low-smoke, Cross-linked Polyethylene (XLPE). Color-coded per ICEA Method 4; individual conductors colored black with conductor number surface printed in contrasting ink.

Jacket: Lead-free, flame-retardant, sunlight-resistant, Low-Smoke, Zero-Halogen Polyolefin (LSZH).

APPLICATIONS

In free air, raceways, aerial or direct burial. In wet or dry locations. Permitted for use in Class I, Division 2 industrial hazardous locations per NEC.

Permitted for Exposed in Class I, Division 2 industrial hazardous locations per NEC. Permitted for Exposed Run (ER) use in accordance with the NEC.

FEATURES

Rated at 90°C wet or dry. Ripcord applied to all cables with jacket thickness of 60 mils or less. Excellent physical and electrical properties. Excellent moisture resistance. Excellent resistance to compression and impact. Chemical-resistant. Low coefficient of friction for easy pulling. Sunlight- and weather-resistant. Meets cold bend test at -30°C. Low-Smoke, Zero-Halogen jacket is environmentally safe and reduces the amount of toxic and corrosive gases emitted during combustion.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC-LS-ER. UL 1581/UL 2556 VW-1. ICEA S-95-658/NEMA WC70. ICEA T-33-655. RoHS compliant.

Flame Test:UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 1202/CSA FT4.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

Three Conductors With Grounding Conductor

USAWC Part #	Size (AWG or kcmil)	No. of Strands	Thickness in Inches		Nominal Diameter (Inches)	Grounding Conductor Size (AWG)	Copper Weight (lbs./1000 ft.)	Net Weight (lbs./1000 ft.)
			Insulation	Overall Jacket				
USA14-03WGLSZHTC	14	7	.030	.045	.430	14	55	118
USA12-03WGLSZHTC	12	7	.030	.045	.480	12	87	160
USA10-03WGLSZHTC	10	7	.030	.060	.565	10	136	237
USA8-03WGLSZHTC	8	7	.045	.060	.655	10	190	314
USA6-03WGLSZHTC	6	7	.045	.060	.740	8	297	456
USA4-03WGLSZHTC	4	7	.045	.080	.880	8	442	642
USA2-03WGLSZHTC	2	7	.045	.080	1.010	6	703	979
USA1-03WGLSZHTC	1	19	.055	.080	1.120	6	872	1021
USA1/0-03WGLSZHTC	1/0	19	.055	.080	1.225	6	1069	1439
USA2/0-03WGLSZHTC	2/0	19	.055	.080	1.300	6	1340	1720
USA3/0-03WGLSZHTC	3/0	19	.055	.080	1.420	4	1717	2176
USA4/0-03WGLSZHTC	4/0	19	.055	.080	1.540	4	2130	2614
USA250-03WGLSZHTC	250	37	.065	.110	1.760	4	2494	3184
USA350-03WGLSZHTC	350	37	.065	.110	1.960	3	3474	4187
USA500-03WGLSZHTC	500	37	.065	.110	2.245	2	4934	5847
USA750-03WGLSZHTC	750	61	.080	.140	2.810	1	7278	9145

TRAY CABLE



- ▶ **4C w/Ground**
- ▶ **LS-XLP**
- ▶ **LZSH**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 8 AWG through 750 kcmil bare annealed copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Lead-free, flame-retardant, low-smoke, Cross-linked Polyethylene (XLPE). Color-coded per ICEA Method 4; individual conductors colored black with conductor number surface printed in contrasting ink.

Jacket: Lead-free, flame-retardant, sunlight-resistant, Low-Smoke, Zero-Halogen Polyolefin (LSZH).

APPLICATIONS

In free air, raceways, aerial or direct burial. In wet or dry locations. Permitted for use in Class I, Division 2 industrial hazardous locations per NEC. Permitted for Exposed in Class I, Division 2 industrial hazardous locations per NEC. Permitted for Exposed Run (ER) use in accordance with the NEC.

FEATURES

Rated at 90°C wet or dry. Ripcord applied to all cables with jacket thickness of 60 mils or less. Excellent physical and electrical properties. Excellent moisture resistance. Excellent resistance to compression and impact. Chemical-resistant. Low coefficient of friction for easy pulling. Sunlight- and weather-resistant. Meets cold bend test at -30°C. Low-Smoke, Zero-Halogen jacket is environmentally safe and reduces the amount of toxic and corrosive gases emitted during combustion.

COMPLIANCES

Industry: UL 44 Type XHHW-2. UL 1277 Type TC-LS-ER. UL 1581/UL 2556 VW-1. ICEA S-95-658/NEMA WC70. ICEA T-33-655. RoHS compliant.

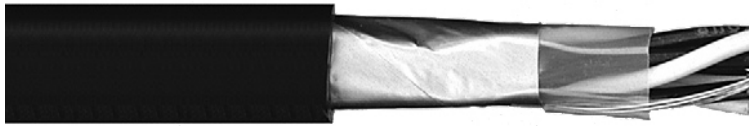
Flame Test:UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 1202/CSA FT4.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

Four Conductors With Grounding Conductor

USAWC Part #	Size (AWG or kcmil)	No. of Strands	Thickness in Inches		Nominal Diameter (Inches)	Grounding Conductor Size (AWG)	Copper Weight (lbs./1000 ft.)	Net Weight (lbs./1000 ft.)
			Insulation	Overall Jacket				
USA8-04WGLSZHTC	8	7	.045	.060	.720	10	242	393
USA6-04WGLSZHTC	6	7	.045	.060	.790	8	384	561
USA4-04WGLSZHTC	4	7	.045	.080	.950	8	578	822
USA2-04WGLSZHTC	2	7	.045	.080	1.090	6	919	1235
USA1-04WGLSZHTC	1	19	.055	.080	1.235	6	1136	1521
USA1/0-04WGLSZHTC	1/0	19	.055	.080	1.330	6	1413	1820
USA2/0-04WGLSZHTC	2/0	19	.055	.080	1.440	6	1760	2208
USA3/0-04WGLSZHTC	3/0	19	.055	.080	1.570	4	2245	2788
USA4/0-04WGLSZHTC	4/0	19	.055	.110	1.790	4	2796	3495
USA250-04WGLSZHTC	250	37	.065	.110	1.915	4	3282	4019
USA350-04WGLSZHTC	350	37	.065	.110	2.165	3	4577	5436
USA500-04WGLSZHTC	500	37	.065	.110	2.475	2	6509	7607
USA750-04WGLSZHTC	750	61	.080	.140	3.115	1	9712	11805

INSTRUMENTATION



- **Pairs/Triads**
- **PVC**
- **PVC**
- **OS**
- **Type PLTC/ITC**
- **300V**

PRODUCT CONSTRUCTION

Conductor: 20 AWG through 16 AWG bare, annealed copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Lead-free Polyvinyl Chloride (PVC). Color-coded per ICEA Method 1: Pairs – black and white; Triads – black, white and red.

One conductor in each pair or triad is printed alphanumerically for easy identification.

Shield: *Overall shielded pairs/triads.* Overall shield is aluminum/polymer in contact with stranded tinned copper drain wire.

Jacket: Lead-free, sunlight-resistant Polyvinyl Chloride (PVC).

APPLICATIONS

In ducts, cable trays or conduit. In accordance with UL Subject 13 as Power-Limited Circuit Cable. In Class 3 circuits in accordance with NEC Article 725. In accordance with UL Subject 2250 as Instrumentation Tray Cable (ITC). Permitted for use in Class I, Division 2 industrial Tray Cable (ITC). Permitted for use in Class I, Division 2 industrial hazardous locations per NEC Article 501.10(B)(4) for UL Type PLTC/ITC cables. Per NEC Article 727 for Type PLTC/ITC.

FEATURES

Rated at 105°C. Oil- and sunlight-resistant. Flame-retardant. Meets cold bend test at -25°C.

COMPLIANCES

Industry: UL Type PLTC/ITC. RoHS compliant.

Flame Test: IEEE 383 (70,000 BTU/hr). UL Subject 13 (70,000 BTU/hr) for PLTC. UL Subject 2250 (70,000 BTU/hr) for ITC.

Other: EPA 40 CFR, Part 261, for leachable lead content per TLCP. OSHA acceptable.

USAWC Part #	No of Pairs/Triads	Size / Strands	Insulation Thickness (Mils)	Jacket Thickness (Inches)	Nominal OD (Inches)	Copper Wt. (lbs./1000 ft.)	Weight (lbs./1000 ft.)
USA20-01POSPLTC	1	20 7/str	12	.035	.207	6.3	25
USA20-02POSPLTC	2	20 7/str	12	.040	.313	12.6	52
USA20-04POSPLTC	4	20 7/str	12	.040	.356	25	70
USA20-08POSPLTC	8	20 7/str	12	.050	.473	50	127
USA20-12POSPLTC	12	20 7/str	12	.050	.565	76	175
USA20-24POSPLTC	24	20 7/str	12	.060	.740	153	376
USA20-36POSPLTC	36	20 7/str	12	.060	.850	238	530
USA20-01TOSPLTC	1 Triad	20 7/str	12	.035	.216	9.5	30
USA18-01POSPLTC	1	18 7/str	15	.035	.239	10	35
USA18-02POSPLTC	2	18 7/str	15	.040	.368	20	68
USA18-04POSPLTC	4	18 7/str	15	.050	.443	40	106
USA18-08POSPLTC	8	18 7/str	15	.050	.565	80	181
USA18-12POSPLTC	12	18 7/str	15	.060	.700	120	267
USA18-16POSPLTC	16	18 7/str	15	.060	.750	171	374
USA18-24POSPLTC	24	18 7/str	15	.070	.915	253	564
USA18-36POSPLTC	36	18 7/str	15	.070	1.030	453	787
USA18-01TOSPLTC	1 Triad	18 7/str	15	.035	.251	15	42
USA16-01POSPLTC	1	16 7/str	15	.035	.263	16	46
USA16-02POSPLTC	2	16 7/str	15	.050	.430	32	96
USA16-04POSPLTC	4	16 7/str	15	.050	.493	64	141
USA16-08POSPLTC	8	16 7/str	15	.060	.654	128	260
USA16-12POSPLTC	12	16 7/str	15	.060	.787	191	367
USA16-16POSPLTC	16	16 7/str	15	.070	.845	270	526
USA16-24POSPLTC	24	16 7/str	15	.070	1.030	400	803
USA16-36POSPLTC	36	16 7/str	15	.070	1.165	599	1122
USA16-01TOSPLTC	1 Triad	16 7/str	15	.035	.277	24	56

INSTRUMENTATION



- **Pairs**
- **PVC**
- **PVC**
- **SPOS**
- **Type PLTC/ITC**
- **300V**

PRODUCT CONSTRUCTION

Conductor: 20 AWG through 16 AWG bare, annealed copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Lead-free Polyvinyl Chloride (PVC). Color-coded per ICEA Method 1: Pairs – black and white. One conductor in each pair is printed alphanumerically for easy identification.

Shield: *Individual and overall shielded pairs.* Individual pairs are 100% shielded with aluminum/polyester in contact with stranded tinned copper drain wire. Overall shield is aluminum/polymer in contact with stranded tinned copper drain wire.

Jacket: Lead-free, sunlight-resistant Polyvinyl Chloride (PVC).

APPLICATIONS

In ducts, cable trays or conduit. In accordance with UL Subject 13 as Power-Limited Circuit Cable. In Class 3 circuits in accordance with Power-Limited Circuit Cable. In Class 3 circuits in accordance with NEC Article 725. In accordance with UL Subject 2250 as Instrumentation Tray Cable (ITC). Permitted for use in Class I, Division 2 industrial hazardous locations per NEC Article 501.10(B)(4) for UL Type PLTC/ITC cables. Per NEC Article 727 for Type PLTC/ITC.

FEATURES

Rated at 105°C. Oil- and sunlight-resistant. Flame-retardant. Meets cold bend test at -25°C.

COMPLIANCES

Industry: UL Type PLTC/ITC. RoHS compliant. Flame Test: IEEE 383 (70,000 BTU/hr). UL Subject 13 (70,000 BTU/hr)

Flame Test: IEEE 383 (70,000 BTU/hr). UL Subject 13 (70,000 BTU/hr) for PLTC. UL Subject 2250 (70,000 BTU/hr) for ITC.

Other: EPA 40 CFR, Part 261, for leachable lead content per TLCP. OSHA acceptable.

USAWC Part #	No of Pairs	Size / Strands	Insulation Thickness (Mils)	Jacket Thickness (Mils)	Nominal OD (Inches)	Copper Wt. (lbs./1000 ft.)	Weight (lbs./1000 ft.)
USA20-02SPOSPLTC	2	20 7/str	12	42	.349	21	66
USA20-04SPOSPLTC	4	20 7/str	12	52	.423	40	101
USA20-08SPOSPLTC	8	20 7/str	12	52	.543	78	170
USA20-12SPOSPLTC	12	20 7/str	12	62	.674	117	250
USA20-16SPOSPLTC	16	20 7/str	12	62	.747	155	316
USA20-24SPOSPLTC	24	20 7/str	12	72	.393	231	466
USA20-36SPOSPLTC	36	20 7/str	12	72	1.071	346	655
USA20-50SPOSPLTC	50	20 7/str	12	82	1.278	479	902
USA18-02SPOSPLTC	2	18 7/str	15	52	.382	28	84
USA18-04SPOSPLTC	4	18 7/str	15	52	.443	53	121
USA18-08SPOSPLTC	8	18 7/str	15	62	.577	104	211
USA18-12SPOSPLTC	12	18 7/str	15	62	.743	155	327
USA18-16SPOSPLTC	16	18 7/str	15	62	.824	206	415
USA18-24SPOSPLTC	24	18 7/str	15	72	1.038	308	614
USA18-36SPOSPLTC	36	18 7/str	15	72	1.187	461	870
USA18-50SPOSPLTC	50	18 7/str	15	82	1.417	640	1201
USA16-02SPOSPLTC	2	16 7/str	15	52	.446	40	120
USA16-04SPOSPLTC	4	16 7/str	15	52	.516	78	174
USA16-08SPOSPLTC	8	16 7/str	15	62	.690	153	317
USA16-12SPOSPLTC	12	16 7/str	15	62	.834	229	449
USA16-16SPOSPLTC	16	16 7/str	15	72	.948	304	592
USA16-24SPOSPLTC	24	16 7/str	15	72	1.171	455	852
USA16-36SPOSPLTC	36	16 7/str	15	82	1.362	662	1245
USA16-50SPOSPLTC	50	16 7/str	15	82	1.603	945	1684

INSTRUMENTATION



- ▶ **Triads**
- ▶ **PVC**
- ▶ **PVC**
- ▶ **STOS**
- ▶ **Type PLTC/ITC**
- ▶ **300V**

PRODUCT CONSTRUCTION

Conductor: 20 AWG through 16 AWG bare, annealed copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Lead-free Polyvinyl Chloride (PVC). Color-coded per ICEA Method 1: Triads – black, white and red. One conductor in each triad is printed alphanumerically for easy identification.

Shield: *Individual and overall shielded triads.* Individual triads are 100% shielded with aluminum/polyester in contact with stranded tinned copper drain wire. Overall shield is aluminum/polymer in contact with stranded tinned copper drain wire.

Jacket: Lead-free, sunlight-resistant Polyvinyl Chloride (PVC).

APPLICATIONS

In ducts, cable trays or conduit. In accordance with UL Subject 13 as Power-Limited Circuit Cable. In Class 3 circuits in accordance with Power-Limited Circuit Cable. In Class 3 circuits in accordance with NEC Article 725. In accordance with UL Subject 2250 as Instrumentation Tray Cable (ITC). Permitted for use in Class I, Division 2 industrial hazardous locations per NEC Article 501.10(B)(4) for UL Type PLTC/ITC cables. Per NEC Article 727 for Type PLTC/ITC.

FEATURES

Rated at 105°C. Oil- and sunlight-resistant. Flame-retardant. Meets cold bend test at -25°C.

COMPLIANCES

Industry: UL Type PLTC/ITC. RoHS compliant. Flame Test: IEEE 383 (70,000 BTU/hr). UL Subject 13 (70,000 BTU/hr)

Flame Test: IEEE 383 (70,000 BTU/hr). UL Subject 13 (70,000 BTU/hr) for PLTC. UL Subject 2250 (70,000 BTU/hr) for ITC.

Other: EPA 40 CFR, Part 261, for leachable lead content per TLCP. OSHA acceptable.

USAWC Part #	No of Triads	Size / Strands	Insulation Thickness (Mils)	Jacket Thickness (Mils)	Nominal OD (Inches)	Copper Wt. (lbs./1000 ft.)	Weight (lbs./1000 ft.)
USA20-02STOSPLTC	2	20 7/str	12	42	.357	26	77
USA20-04STOSPLTC	4	20 7/str	12	52	.433	48	122
USA20-08STOSPLTC	8	20 7/str	12	52	.556	97	212
USA20-12STOSPLTC	12	20 7/str	12	62	.690	145	313
USA20-16STOSPLTC	16	20 7/str	12	62	.765	192	399
USA20-24STOSPLTC	24	20 7/str	12	72	.963	288	591
USA18-02STOSPLTC	2	18 7/str	15	52	.431	38	108
USA18-04STOSPLTC	4	18 7/str	15	52	.476	73	160
USA18-08STOSPLTC	8	18 7/str	15	62	.635	147	293
USA18-12STOSPLTC	12	18 7/str	15	62	.764	215	416
USA18-16STOSPLTC	16	18 7/str	15	62	.849	286	533
USA18-24STOSPLTC	24	18 7/str	15	72	1.070	428	793
USA16-02STOSPLTC	2	16 7/str	15	52	.460	54	146
USA16-04STOSPLTC	4	16 7/str	15	52	.533	108	221
USA16-08STOSPLTC	8	16 7/str	15	62	.713	218	410
USA16-12STOSPLTC	12	16 7/str	15	62	.863	325	587
USA16-16STOSPLTC	16	16 7/str	15	72	.981	433	777
USA16-24STOSPLTC	24	16 7/str	15	72	1.212	649	1130

INSTRUMENTATION



- **Pairs**
- **PVC/Nylon**
- **PVC**
- **SPOS**
- **Type TC-ER**
- **600V**

PRODUCT CONSTRUCTION

Conductor: 18 AWG and 16 AWG bare, annealed copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Flame-retardant Polyvinyl Chloride (PVC) with clear Polyamide (nylon). Color-coded per ICEA Method 1: Pairs – black and white. One conductor in each pair is printed alphanumerically for easy identification.

Shield: *Individual and overall shielded pairs.* Individual triads are 100% shielded with aluminum/polyester in contact with stranded tinned copper drain wire. Overall shield is aluminum/polymer in contact with stranded tinned copper drain wire.

Jacket: Lead-free, sunlight-resistant Polyvinyl Chloride (PVC).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. Permitted for use in Class I, Division 2 industrial hazardous locations per NEC.

FEATURES

Rated at 90°C dry, 75°C wet. Ripcord applied to all cables with jacket thickness of 60 mils or less. Provides sunlight, cold bend and cold impact resistance. Offers the smallest cable O.D. available for suitable applications. Provides excellent oil and chemical resistance. Meets cold bend test at -25° C.

COMPLIANCES

Industry: UL 1277 Type TC. UL 1581. NEC Type TFN conductors. ICEA S-73-532/NEMA WC57.

Flame Test: UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable. RoHS compliant.

USAWC Part #	No. of Pairs	Size Strands	Insulation Thickness (Mils) (PVC/Nylon)	Jacket Thickness (Mils)	Nominal OD (Inches)	Copper Weight (lbs./1000 ft.)	Approx. Net Wt. (lbs./1000 ft.)
USA18-02SPOSVNTC	2	18 7/Str	15/4	47	.429	30	96
USA18-04SPOSVNTC	4	18 7/Str	15/4	47	.498	55	139
USA18-08SPOSVNTC	8	18 7/Str	15/4	62	.678	105	257
USA18-12SPOSVNTC	12	18 7/Str	15/4	62	.819	156	359
USA18-16SPOSVNTC	16	18 7/Str	15/4	82	.951	207	490
USA18-24SPOSVNTC	24	18 7/Str	15/4	82	1.169	302	695
USA18-36SPOSVNTC	36	18 7/Str	15/4	82	1.336	452	987
USA18-50SPOSVNTC	50	18 7/Str	15/4	82	1.572	628	1314
USA16-02SPOSVNTC	2	16 7/Str	15/4	47	.480	42	127
USA16-03SPOSVNTC	3	16 7/Str	15/4	47	.514	61	145
USA16-04SPOSVNTC	4	16 7/Str	15/4	62	.590	80	207
USA16-06SPOSVNTC	6	16 7/Str	15/4	62	.694	116	270
USA16-08SPOSVNTC	8	16 7/Str	15/4	62	.763	155	344
USA16-12SPOSVNTC	12	16 7/Str	15/4	82	.966	230	521
USA16-16SPOSVNTC	16	16 7/Str	15/4	82	1.072	306	660
USA16-24SPOSVNTC	24	16 7/Str	15/4	82	1.323	456	944
USA16-36SPOSVNTC	36	16 7/Str	15/4	92	1.536	674	1370
USA16-50SPOSVNTC	50	16 7/Str	15/4	112	1.849	935	1914

INSTRUMENTATION TRAY CABLE Type TC (POS/TOS)

INSTRUMENT WIRE 600 VOLT TC

USAWC Part #	No. of Pairs/Triads	Size Strands	Insulation Thickness (Mils) (PVC/Nylon)	Jacket Thickness (Mils)	Nominal OD (Inches)	Copper Weight (lbs./1000 ft.)	Approx. Net Wt. (lbs./1000 ft.)
USA18-01POSVNTC	1 Pair	18 7/Str	15/4	47	.270	12	42
USA16-01POSVNTC	1 Pair	16 7/Str	15/4	47	.294	18	55
USA18-01TOSVNTC	1 Triad	18 7/Str	15/4	47	.283	18	51
USA16-01TOSVNTC	1 Triad	16 7/Str	15/4	47	.309	27	68

Note: Standard color coding is Method E-1 for NEC applications per ICEA; Pairs – black and white. Triads – black, white and red. One conductor in each pair is printed alphanumerically.

INSTRUMENTATION



- **Triads**
- **PVC/Nylon**
- **PVC**
- **STOS**
- **Type TC-ER**
- **600V**

PRODUCT CONSTRUCTION

Conductor: 18 AWG and 16 AWG bare, annealed copper per ASTM B3. Class B stranding per ASTM B8.

Insulation: Flame-retardant Polyvinyl Chloride (PVC) with clear Polyamide (nylon). Color-coded per ICEA Method 1: Triads – black, white and red.

One conductor in each triad is printed alphanumerically for easy identification.

Shield: *Individual and overall shielded triads.* Individual triads are 100% shielded with aluminum/polyester in contact with stranded tinned copper drain wire. Overall shield is aluminum/polymer in contact with stranded tinned copper drain wire.

Jacket: Lead-free, flame-retardant, sunlight-resistant Polyvinyl Chloride (PVC).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. Permitted for use in Class I, Division 2 industrial hazardous locations per NEC.

FEATURES

Rated at 90°C dry, 75°C wet. Ripcord applied to all cables with jacket thickness of 60 mils or less. Provides sunlight, cold bend and cold impact resistance. Offers the smallest cable O.D. available for suitable applications. Provides excellent oil and chemical resistance. Meets cold bend test at -25° C.

COMPLIANCES

Industry: UL 1277 Type TC. UL 1581. NEC Type TFN conductors. ICEA S-73-532/NEMA WC57.

Flame Test: UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable. RoHS compliant.

USAWC Part #	No. of Triads	Size Strands	Insulation Thickness (Mils) (PVC/Nylon)	Jacket Thickness (Mils)	Nominal OD (Inches)	Copper Weight (lbs./1000 ft.)	Approx. Net Wt. (lbs./1000 ft.)
USA18-02STOSVNTC	2	18 7/Str	15/4	47	.453	38	117
USA18-04STOSVNTC	4	18 7/Str	15/4	62	.557	73	190
USA18-08STOSVNTC	8	18 7/Str	15/4	62	.718	144	327
USA18-12STOSVNTC	12	18 7/Str	15/4	82	.909	218	495
USA18-16STOSVNTC	16	18 7/Str	15/4	82	1.008	290	628
USA18-24STOSVNTC	24	18 7/Str	15/4	82	1.242	433	899
USA18-36STOSVNTC	36	18 7/Str	15/4	82	1.421	649	1279
USA16-02STOSVNTC	2	16 7/Str	15/4	47	.509	57	156
USA16-04STOSVNTC	4	16 7/Str	15/4	62	.624	108	253
USA16-08STOSVNTC	8	16 7/Str	15/4	62	.810	217	444
USA16-12STOSVNTC	12	16 7/Str	15/4	82	1.024	328	671
USA16-16STOSVNTC	16	16 7/Str	15/4	82	1.138	436	858
USA16-24STOSVNTC	24	16 7/Str	15/4	82	1.408	653	1238
USA16-36STOSVNTC	36	16 7/Str	15/4	82	1.615	979	1777

INSTRUMENTATION



- **Pairs/Triads**
- **FR-EPR**
- **CPE**
- **OS**
- **Type TC-ER**
- **600V**

PRODUCT CONSTRUCTION

Conductor: 18 AWG and 16 AWG tinned, annealed copper per ASTM B33. Class B stranding per ASTM B8.

Insulation: Flame-retardant Ethylene Propylene Rubber (FR-EPR) Type II. Color-coded per ICEA Method 1: Pairs – black and white; Triads – black, white and red. One conductor in each pair is printed alphanumerically for easy identification.

Shield: *Overall shielded pairs/triads.* Overall shield is aluminum/polymer in contact with stranded tinned copper drain wire.

Jacket: Lead-free, flame-retardant, thermoplastic Chlorinated Polyethylene (CPE).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. Permitted for use in Class I, Division 2 industrial hazardous locations per NEC.

FEATURES

Rated at 90°C wet or dry. Ripcord applied to all cables with jacket thickness of 60 mils or less. Excellent physical, thermal and electrical properties. Excellent moisture resistance. Excellent resistance to compression cuts and heat deformation. Excellent flame resistance – burns to an ash; does not exhibit thermoplastic drip. Low coefficient of friction for easy pulling. Sunlight- and weather-resistant. Excellent low temperature cold bend characteristics. Meets cold bend test at -40°C.

COMPLIANCES

Industry: UL 1277 Type TC. UL 1581. ICEA S-73-532/NEMA WC57.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4. ICEA T-29-520.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

USAWC Part #	No of Pairs/Triads	Size / Strands	Insulation Thickness (Inches)	Jacket Thickness (Inches)	Nominal OD (Inches)	Copper Weight (lbs./1000 ft.)	Net Weight (lbs./1000 ft.)
USA18-01POSECPETC	1	18 / 7 str	.025	.045	.300	13	42
USA18-01TOSECPETC	1 TRI	18 / 7 str	.025	.045	.315	18	53
USA16-01POSECPETC	1	16 / 7 str	.025	.045	.320	18	52
USA16-01TOSECPETC	1 TRI	16 / 7 str	.025	.045	.335	26	66

INSTRUMENTATION



- **Pairs**
- **FR-EPR**
- **CPE**
- **SPOS**
- **Type TC-ER**
- **600V**

PRODUCT CONSTRUCTION

Conductor: 18 AWG and 16 AWG tinned, annealed copper per ASTM B33. Class B stranding per ASTM B8.

Insulation: Flame-retardant Ethylene Propylene Rubber (FR-EPR) Type II. Color-coded per ICEA Method 1: Pairs – black and white. One conductor in each pair is printed alphanumerically for easy identification.

Shield: *Individual and overall shielded pairs.* Individual pairs are 100% shielded with aluminum/polyester in contact with stranded tinned copper drain wire. Overall shield is aluminum/polymer in contact with stranded tinned copper drain wire.

Jacket: Lead-free, flame-retardant, thermoplastic Chlorinated Polyethylene (CPE).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. Permitted for use in Class I, Division 2 industrial hazardous locations per NEC.

FEATURES

Rated at 90°C wet or dry. Ripcord applied to all cables with jacket thickness of 60 mils or less. Excellent physical, thermal and electrical properties. Excellent moisture resistance. Excellent resistance to compression cuts and heat deformation. Excellent flame resistance – burns to an ash; does not exhibit thermoplastic drip. Low coefficient of friction for easy pulling. Sunlight- and weather-resistant. Excellent low temperature cold bend characteristics. Meets cold bend test at -40°C.

COMPLIANCES

Industry: UL 1277 Type TC. UL 1581. ICEA S-73-532/NEMA WC57.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4. ICEA T-29-520.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

USAWC Part #	No. of Pairs	Size Strands	Insulation Thickness (Inches)	Jacket Thickness (Inches)	Nominal OD (Inches)	Copper Net Wt. (lbs./1000 ft.)	Approx. Net Wt. (lbs./1000 ft.)
USA18-02SPOSECPETC	2	18 7/Str	.025	.045	.473	27	83
USA18-04SPOSECPETC	4	18 7/Str	.025	.060	.586	53	152
USA18-08SPOSECPETC	8	18 7/Str	.025	.060	.751	103	259
USA18-12SPOSECPETC	12	18 7/Str	.025	.080	.948	153	398
USA18-16SPOSECPETC	16	18 7/Str	.025	.080	1.050	206	502
USA18-24SPOSECPETC	24	18 7/Str	.025	.080	1.220	311	709
USA18-36SPOSECPETC	36	18 7/Str	.025	.080	1.474	461	1008
USA18-50SPOSECPETC	50	18 7/Str	.025	.110	1.780	640	1454
USA16-02SPOSECPETC	2	16 7/Str	.025	.045	.500	40	103
USA16-04SPOSECPETC	4	16 7/Str	.025	.060	.650	77	189
USA16-06SPOSECPETC	6	16 7/Str	.025	.060	.755	115	268
USA16-08SPOSECPETC	8	16 7/Str	.025	.060	.840	151	330
USA16-12SPOSECPETC	12	16 7/Str	.025	.080	1.065	226	506
USA16-16SPOSECPETC	16	16 7/Str	.025	.080	1.185	305	643
USA16-24SPOSECPETC	24	16 7/Str	.025	.080	1.485	455	932
USA16-36SPOSECPETC	36	16 7/Str	.025	.080	1.760	683	1410
USA16-50SPOSECPETC	50	16 7/Str	.025	.110	2.035	946	1883

INSTRUMENTATION



- ▶ **Triads**
- ▶ **FR-EPR**
- ▶ **CPE**
- ▶ **STOS**
- ▶ **Type TC-ER**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 18 AWG and 16 AWG tinned, annealed copper per ASTM B33. Class B stranding per ASTM B8.

Insulation: Flame-retardant Ethylene Propylene Rubber (FR-EPR) Type II. Color-coded per ICEA Method 1: Triads – black, white and red.

One conductor in each triad is printed alphanumerically for easy identification.

Shield: *Individual and overall shielded triads.* Individual triads are 100% shielded with aluminum/polyester in contact with stranded tinned copper drain wire. Overall shield is aluminum/polymer in contact with stranded tinned copper drain wire.

Jacket: Lead-free, flame-retardant, thermoplastic Chlorinated Polyethylene (CPE).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. Permitted for use in Class I, Division 2 industrial hazardous locations per NEC.

FEATURES

Rated at 90°C wet or dry. Ripcord applied to all cables with jacket thickness of 60 mils or less. Excellent physical, thermal and electrical properties. Excellent moisture resistance. Excellent resistance to compression cuts and heat deformation. Excellent flame resistance – burns to an ash; does not exhibit thermoplastic drip. Low coefficient of friction for easy pulling. Sunlight- and weather-resistant. Excellent low temperature cold bend characteristics. Meets cold bend test at -40°C.

COMPLIANCES

Industry: UL 1277 Type TC. UL 1581. ICEA S-73-532/NEMA WC57.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4. ICEA T-29-520.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

USAWC Part #	No. of Triads	Size Strands	Insulation Thickness (Inches)	Jacket Thickness (Inches)	Nominal OD (Inches)	Copper Net Wt. (lbs./1000 ft.)	Approx. Net Wt. (lbs./1000 ft.)
USA18-02STOSECPETC	2	18 7/Str	.025	.060	.560	38	127
USA18-04STOSECPETC	4	18 7/Str	.025	.060	.640	73	201
USA18-08STOSECPETC	8	18 7/Str	.025	.080	.825	144	343
USA18-12STOSECPETC	12	18 7/Str	.025	.080	1.065	218	528
USA18-16STOSECPETC	16	18 7/Str	.025	.080	1.180	290	675
USA18-24STOSECPETC	24	18 7/Str	.025	.080	1.500	433	972
USA18-36STOSECPETC	36	18 7/Str	.025	.080	1.740	649	1470
USA16-02STOSECPETC	2	16 7/Str	.025	.060	.615	57	159
USA16-04STOSECPETC	4	16 7/Str	.025	.060	.705	108	249
USA16-08STOSECPETC	8	16 7/Str	.025	.060	.850	217	472
USA16-12STOSECPETC	12	16 7/Str	.025	.080	1.160	328	683
USA16-16STOSECPETC	16	16 7/Str	.025	.080	1.290	436	879
USA16-24STOSECPETC	24	16 7/Str	.025	.080	1.615	653	1266
USA16-36STOSECPETC	36	16 7/Str	.025	.110	1.920	979	1918

INSTRUMENTATION



- **Pairs/Triads**
- **LS-XLP**
- **LSZH**
- **OS**
- **Type TC**
- **600V**

PRODUCT CONSTRUCTION

Conductor: 18 AWG and 16 AWG tinned, annealed copper per ASTM B33. Class B stranding per ASTM B8.

Insulation: Lead-free, flame-retardant, low-smoke, Cross-Linked Polyethylene (XLPE). Color-coded per ICEA Method 1: Pairs – black and white. Triads – black, white and red. One conductor in each pair or triad is printed alphanumerically for easy identification.

Shield: *Overall shielded pairs/triads.* Overall shield is aluminum/polymer in contact with stranded tinned copper drain wire.

Jacket: Lead-free, flame-retardant, sunlight-resistant, Low-Smoke, Zero-Halogen Polyolefin (LSZH).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. Permitted for use in Class I, Division 2 industrial hazardous locations per NEC.

FEATURES

Rated at 90°C wet or dry. Ripcord applied to all cables with jacket thickness of 60 mils or less. Excellent physical and electrical properties. Excellent moisture resistance. Excellent resistance to compression and impact. Chemical-resistant. Low coefficient of friction for easy pulling. Sunlight- and weather-resistant. Meets cold bend test at -30°C. Low-Smoke, Zero-Halogen jacket is environmentally safe and reduces the amount of toxic and corrosive gases emitted during combustion.

COMPLIANCES

Industry: UL 1277 Type TC-LS. UL 1581. ICEA S-73-532/NEMA WC57. ICEA T-33-655. RoHS compliant.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4. ICEA T-29-520.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

USAWC Part #	No. of Pairs/Triads	Size Strands	Insulation Thickness (Inches)	Jacket Thickness (Inches)	Nominal OD (Inches)	Copper Weight (lbs./1000 ft.)	Approx. Net Wt. (lbs./1000 ft.)
USA18-01POSLSZHTC	1	18 7/Str	.030	.045	.315	13	46
USA18-01TOSLSZHTC	1 TRI	18 7/Str	.030	.045	.340	18	58
USA16-01POSLSZHTC	1	16 7/Str	.030	.045	.345	18	32
USA16-01TOSLSZHTC	1 TRI	16 7/Str	.030	.045	.360	26	72

Note: Standard color coding is Method E-1 for NEC applications per ICEA; Pairs – black and white. Triads – black, white and red. One conductor in each pair or triad is printed alphanumerically.

INSTRUMENTATION



- **Pairs**
- **LS-XLP**
- **LSZH**
- **SPOS**
- **Type TC**
- **600V**

PRODUCT CONSTRUCTION

Conductor: 18 AWG and 16 AWG tinned, annealed copper per ASTM B33. Class B stranding per ASTM B8.

Insulation: Lead-free, flame-retardant, low-smoke, Cross-Linked Polyethylene (XLPE). Color-coded per ICEA Method 1: Pairs – black and white. One conductor in each pair is printed alphanumerically for easy identification.

Shield: *Individual and overall shielded pairs.* Individual pairs are 100% individually shielded with aluminum/polyester in contact with stranded tinned copper drain wire. Overall shield is aluminum/polymer in contact with stranded tinned copper drain wire.

Jacket: Lead-free, flame-retardant, sunlight-resistant, Low-Smoke, Zero-Halogen Polyolefin (LSZH).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. Permitted for use in Class I, Division 2 industrial hazardous locations per NEC.

FEATURES

Rated at 90°C wet or dry. Ripcord applied to all cables with jacket thickness of 60 mils or less. Excellent physical and electrical properties. Excellent moisture resistance. Excellent resistance to compression and impact. Chemical-resistant. Low coefficient of friction for easy pulling. Sunlight- and weather-resistant. Meets cold bend test at -30°C. Low-Smoke, Zero-Halogen jacket is environmentally safe and reduces the amount of toxic and corrosive gases emitted during combustion.

COMPLIANCES

Industry: UL 1277 Type TC-LS. UL 1581. ICEA S-73-532/NEMA WC57. ICEA T-33-655. RoHS compliant.

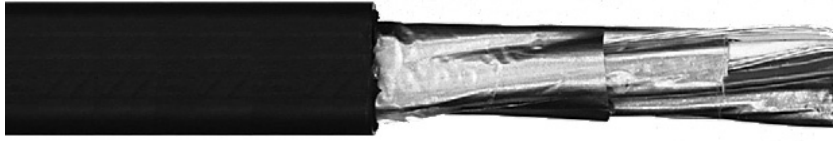
Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4. ICEA T-29-520.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

USAWC Part #	No. of Pairs	Size Strands	Insulation Thickness (Inches)	Jacket Thickness (Inches)	Nominal OD (Inches)	Copper Weight (lbs./1000 ft.)	Approx. Net Wt. (lbs./1000 ft.)
USA18-02SPOSLSZHTC	2	18 7/Str	.030	.045	.510	27	92
USA18-04SPOSLSZHTC	4	18 7/Str	.030	.060	.630	53	167
USA18-08SPOSLSZHTC	8	18 7/Str	.030	.080	.855	103	326
USA18-12SPOSLSZHTC	12	18 7/Str	.030	.080	1.030	153	441
USA18-16SPOSLSZHTC	16	18 7/Str	.030	.080	1.140	206	554
USA18-24SPOSLSZHTC	24	18 7/Str	.030	.080	1.450	311	795
USA18-36SPOSLSZHTC	36	18 7/Str	.030	.110	1.650	461	1118
USA18-50SPOSLSZHTC	50	18 7/Str	.030	.110	2.085	640	1616
USA16-02SPOSLSZHTC	2	16 7/Str	.030	.060	.585	40	130
USA16-04SPOSLSZHTC	4	16 7/Str	.030	.060	.675	77	204
USA16-06SPOSLSZHTC	6	16 7/Str	.030	.060	.800	115	301
USA16-08SPOSLSZHTC	8	16 7/Str	.030	.080	.915	151	394
USA16-12SPOSLSZHTC	12	16 7/Str	.030	.080	1.110	226	548
USA16-16SPOSLSZHTC	16	16 7/Str	.030	.080	1.350	305	713
USA16-24SPOSLSZHTC	24	16 7/Str	.030	.080	1.570	455	1001
USA16-36SPOSLSZHTC	36	16 7/Str	.030	.110	1.980	683	1548
USA16-50SPOSLSZHTC	50	16 7/Str	.030	.110	2.165	946	2020

Note: Standard color coding is Method E-1 for NEC applications per ICEA; Pairs– black and white. One conductor in each pair is printed alphanumerically.

INSTRUMENTATION



- **Triads**
- **LS-XLP**
- **LSZH**
- **STOS**
- **Type TC**
- **600V**

PRODUCT CONSTRUCTION

Conductor: 18 AWG and 16 AWG tinned, annealed copper per ASTM B33. Class B stranding per ASTM B8.

Insulation: Lead-free, flame-retardant, low-smoke, Cross-Linked Polyethylene (XLPE). Color-coded per ICEA Method 1: Triads – black, white and red. One conductor in each triad is printed alphanumerically for easy identification.

Shield: *Individual and overall shielded triads.* Individual triads are 100% individually shielded with aluminum/polyester in contact with stranded tinned copper drain wire. Overall shield is aluminum/polymer in contact with stranded tinned copper drain wire.

Jacket: Lead-free, flame-retardant, sunlight-resistant, Low-Smoke, Zero-Halogen Polyolefin (LSZH).

APPLICATIONS

In free air, raceways or direct burial. In wet or dry locations. Permitted for use in Class I, Division 2 industrial hazardous locations per NEC.

FEATURES

Rated at 90°C wet or dry. Ripcord applied to all cables with jacket thickness of 60 mils or less. Excellent physical and electrical properties. Excellent moisture resistance. Excellent resistance to compression and impact. Chemical-resistant. Low coefficient of friction for easy pulling. Sunlight- and weather-resistant. Meets cold bend test at -30°C. Low-Smoke, Zero-Halogen jacket is environmentally safe and reduces the amount of toxic and corrosive gases emitted during combustion.

COMPLIANCES

Industry: UL 1277 Type TC-LS. UL 1581. ICEA S-73-532/NEMA WC57. ICEA T-33-655. RoHS compliant.

Flame Test: UL 1581/UL 2556 VW-1. UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202. CSA FT4. ICEA T-29-520.

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

USAWC Part #	No. of Triads	Size Strands	Insulation Thickness (Inches)	Jacket Thickness (Inches)	Nominal OD (Inches)	Copper Weight (lbs./1000 ft.)	Approx. Net Wt. (lbs./1000 ft.)
USA18-02STOSLSZHTC	2	18 7/Str	.030	.060	.595	38	150
USA18-04STOSLSZHTC	4	18 7/Str	.030	.060	.690	74	231
USA18-08STOSLSZHTC	8	18 7/Str	.030	.080	.940	145	435
USA18-12STOSLSZHTC	12	18 7/Str	.030	.080	1.135	217	612
USA18-16STOSLSZHTC	16	18 7/Str	.030	.080	1.265	289	773
USA18-24STOSLSZHTC	24	18 7/Str	.030	.080	1.565	432	1097
USA18-36STOSLSZHTC	36	18 7/Str	.030	.110	1.860	647	1662
USA16-02STOSLSZHTC	2	16 7/Str	.030	.060	.640	57	183
USA16-04STOSLSZHTC	4	16 7/Str	.030	.060	.745	111	494
USA16-08STOSLSZHTC	8	16 7/Str	.030	.080	1.015	219	549
USA16-12STOSLSZHTC	12	16 7/Str	.030	.080	1.230	328	777
USA16-16STOSLSZHTC	16	16 7/Str	.030	.080	1.370	437	988
USA16-24STOSLSZHTC	24	16 7/Str	.030	.110	1.760	654	1530
USA16-36STOSLSZHTC	36	16 7/Str	.030	.110	2.015	979	2142

Note: Standard color coding is Method E-1 for NEC applications per ICEA; Triads– black, white and red. One conductor in each triad is printed alphanumerically.

THERMOCOUPLE



- ▶ **Pairs**
- ▶ **PVC**
- ▶ **PVC**
- ▶ **OS/SPOS**
- ▶ **Type PLTC/ITC**
- ▶ **300V**

PRODUCT CONSTRUCTION

Conductor: Solid thermocouple extension alloy conductors per ANSI MC96.1.

Insulation: 105°C PVC. Minimum average insulation thickness for 20 and 16 AWG is .0015 in.

Shield: Pairs are shielded with 100% coverage aluminum/polyester tape and include a tinned copper drain wire. Shield tape provides total shield isolation from all other shields. Cabled pairs are overall shielded with 100% coverage aluminum/polyester with 100% coverage aluminum/polyester tape, including a 20 AWG, seven-strand tinned copper drain wire. Aluminum/polyester tape thickness of .00135 in. Overall shielded designs with copper tape or braided tinned copper are also available.

Jacket: 105°C FR PVC, sunlight-resistant, thickness per UL 13 and UL 2250, footage sequentially printed. Thermocouple extension cables use the ANSI color corresponding to the thermocouple extension alloy type contained in the construction. Additional colors are available upon request.

APPLICATIONS

UL listed 300 V Power Limited Tray Cable (PLTC)/Instrumentation Tray Cable (ITC) to UL 13 and UL 2250 for use in Class I, Zone 2 and Class II, Division 2 industrial hazardous locations per NEC.

FEATURES

Sunlight-resistant. Overall cable rated 105°C per UL.

COMPLIANCES

Flame Test: UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202.

Jackets: KX – yellow jacket, EX – purple jacket, JX – black jacket, NX – orange jacket, SX – green jacket, TX – blue jacket
Solid conductors are standard; stranded is available upon request. 300 V is standard; 600 V is available upon request.

Replace underscore with alloy type.

USAWC Part #	No. of Pairs	Size (AWG)	Jacket Thickness (Inches)	Nominal OD (Inches)	Weight (lbs./1000 ft.)
USA20-01POS_XPVC	1	20	.035	.203	24
USA20-02SPOS_XPVC	2	20	.040	.322	58
USA20-04SPOS_XPVC	4	20	.040	.367	81
USA20-08SPOS_XPVC	8	20	.050	.488	148
USA20-12SPOS_XPVC	12	20	.050	.584	208
USA20-16SPOS_XPVC	16	20	.060	.666	272
USA20-24SPOS_XPVC	24	20	.060	.812	389
USA20-36SPOS_XPVC	36	20	.070	.949	566
USA20-50SPOS_XPVC	50	29	.070	1.088	756
USA16-01POS_XPVC	1	16	.035	.253	43
USA16-02SPOS_XPVC	2	16	.050	.432	106
USA16-04SPOS_XPVC	4	16	.050	.495	160
USA16-08SPOS_XPVC	8	16	.060	.657	299
USA16-12SPOS_XPVC	12	16	.060	.791	426
USA16-16SPOS_XPVC	16	16	.060	.877	540
USA16-24SPOS_XPVC	24	16	.070	1.106	811
USA16-36SPOS_XPVC	36	16	.070	1.264	1153
USA16-50SPOS_XPVC	50	16	.080	1.479	1589

INSTRUMENTATION



- **Pairs**
- **XLP**
- **PVC**
- **OS**
- **Type PLTC/ITC**
- **300V**

PRODUCT CONSTRUCTION

Conductor: Solid thermocouple extension alloy conductors per ANSI MC96.1. Stranded thermocouple extension alloys available upon request.

Insulation: 105°C PVC. Minimum average insulation thickness for 20, 18 and 16 AWG is .0015 in. VW-1 rated conductors are available upon request.

Shield: Pairs are shielded with 100% coverage aluminum/polyester tape and include a tinned copper drain wire. Aluminum/polyester tape thickness of .00135 in. Overall shielded designs with copper tape or braided tinned copper are also available.

Jacket: 105°C FR PVC, sunlight-resistant, thickness per UL 13 and UL 2250, footage sequentially printed. Suitable for -70°C environment. Black 90°C FR, sunlight-resistant Thermoset Chlorosulfonated Polyethylene (CSPE), commonly referred to as Hypalon®, rated Oil Res I and Oil Res II. Thermocouple extension cables use the ANSI color corresponding to the thermocouple extension alloy type contained in the construction. Additional colors are available upon request.

APPLICATIONS

UL listed 300V Power Limited Tray Cable (PLTC)/Instrumentation Tray Cable (ITC) to UL 13 and UL 2250 for use in Class I, Zone 2 and Class II, Division 2 industrial hazardous locations per NEC.

FEATURES

Sunlight-resistant. Overall cable rated 105°C per UL.

COMPLIANCES

Flame Test: UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202.

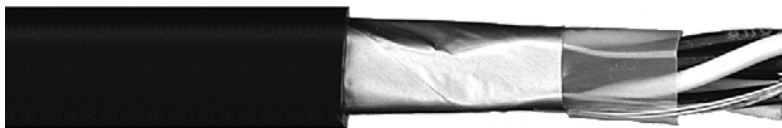
		UNARMORED			INTERLOCKED ALUMINUM ARMOR		
USAWC PART #	# of Pairs	Jacket Thickness (Inches)	Nominal OD (Inches)	Weight (lbs./1000 ft.)	Jacket Thickness (Inches)	Nominal OD (Inches)	Weight (lbs./1000 ft.)
20 AWG							
USA20-01POS_XXCPE	1	.035	.215	26	.040	.523	113
USA20-02POS_XXCPE	2	.040	.320	52	.050	.648	170
USA20-04POS_XXCPE	4	.040	.364	70	.050	.692	203
USA20-06POS_XXCPE	6	.050	.451	105	.050	.779	258
USA20-08POS_XXCPE	8	.050	.485	126	.050	.813	288
USA20-12POS_XXCPE	12	.050	.579	174	.050	.907	358
USA20-16POS_XXCPE	16	.060	.660	227	.050	.988	431
USA20-24POS_XXCPE	24	.060	.805	322	.050	1.153	564
USA20-36POS_XXCPE	36	.070	.941	465	.050	1.289	739
USA20-50POS_XXCPE	50	.070	1.079	615	.050	1.427	923
18 AWG							
USA18-01POS_XXCPE	1	.035	.231	32	.050	.559	134
USA18-02POS_XXCPE	2	.040	.348	63	.050	.676	192
USA18-04POS_XXCPE	4	.050	.418	96	.050	.746	242
USA18-06POS_XXCPE	6	.050	.493	133	.050	.821	297
USA18-08POS_XXCPE	8	.050	.530	164	.050	.858	336
USA18-12POS_XXCPE	12	.060	.657	240	.050	.985	443
USA18-16POS_XXCPE	16	.060	.726	300	.050	1.054	520
USA18-24POS_XXCPE	24	.060	.889	429	.050	1.237	691
USA18-36POS_XXCPE	36	.070	1.038	624	.050	1.386	922
USA18-50POS_XXCPE	50	.070	1.193	832	.050	1.541	1168
16 AWG							
USA16-01POS_XXCPE	1	.035	.253	42	.050	.581	149
USA16-02POS_XXCPE	2	.040	.386	80	.050	.714	218
USA16-04POS_XXCPE	4	.050	.464	129	.050	.792	286
USA16-06POS_XXCPE	6	.050	.550	183	.050	.878	360
USA16-08POS_XXCPE	8	.050	.594	226	.050	.922	414
USA16-12POS_XXCPE	12	.060	.736	333	.050	1.064	555
USA16-16POS_XXCPE	16	.060	.816	421	.050	1.164	666
USA16-24POS_XXCPE	24	.070	1.028	632	.050	1.376	927
USA16-36POS_XXCPE	36	.070	1.172	891	.050	1.520	1221
USA16-50POS_XXCPE	50	.080	1.371	1224	.050	1.739	1635

Replace CPE in the part number with AIA for Aluminum Interlocked Armor. Replace CPE in the part number with SWA for Steel Served Wire Armor.

Jackets: KX – yellow jacket, EX – purple jacket, JX – black jacket, NX – orange jacket, SX – green jacket, TX – blue jacket

Solid conductors are standard; stranded is available upon request. 300V is standard; 600V is available upon request

INSTRUMENTATION



- **Pairs**
- **PVC**
- **PVC**
- **OS**
- **Type PLTC/ITC**
- **300V**

PRODUCT CONSTRUCTION

Conductor: Solid thermocouple extension alloy conductors per ANSI MC96.1. Stranded thermocouple extension alloys available upon request.

Insulation: 105°C PVC. Minimum average insulation thickness for 20, 18 and 16 AWG is .0015 in.

Shield: *Overall shielded pairs.* Overall shield is aluminum/polymer in contact with stranded tinned copper drain wire.

Jacket: 105°C FR PVC, sunlight-resistant, thickness per UL 13 and UL 2250, footage sequentially printed. Thermocouple extension cables use the ANSI color corresponding to the thermocouple extension alloy type contained in the construction. Additional colors are available upon request.

APPLICATIONS

UL listed 300V Power Limited Tray Cable (PLTC)/Instrumentation Tray Cable (ITC) to UL 13 and UL 2250 for use in Class I, Zone 2 and Class II, Division 2 industrial hazardous locations per NEC.

FEATURES

Sunlight-resistant. Overall cable rated 105°C per UL.

COMPLIANCES

Flame Test: UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202.

		UNARMORED			INTERLOCKED ALUMINUM ARMOR		
USAWC PART #	# of Pairs	Jacket Thickness (Inches)	Nominal OD (Inches)	Weight (lbs./1000 ft.)	Jacket Thickness (Inches)	Nominal OD (Inches)	Weight (lbs./1000 ft.)
20 AWG							
USA20-01POS_XPVC	1	.035	.203	24	.035	.501	104
USA20-02POS_XPVC	2	.040	.299	47	.035	.597	145
USA20-04POS_XPVC	4	.040	.339	65	.040	.647	180
USA20-06POS_XPVC	6	.050	.420	98	.040	.728	230
USA20-08POS_XPVC	8	.050	.450	118	.040	.758	257
USA20-12POS_XPVC	12	.050	.536	160	.040	.844	318
USA20-16POS_XPVC	16	.050	.591	201	.050	.919	388
USA20-24POS_XPVC	24	.060	.742	300	.050	1.071	524
USA20-36POS_XPVC	36	.060	.843	416	.050	1.191	667
USA20-50POS_XPVC	50	.070	.993	574	.050	1.341	861
18 AWG							
USA18-01POS_XPVC	1	.035	.231	32	.035	.529	118
USA18-02POS_XPVC	2	.040	.348	64	.035	.656	180
USA18-04POS_XPVC	4	.050	.418	97	.040	.726	229
USA18-06POS_XPVC	6	.050	.493	134	.040	.801	283
USA18-08POS_XPVC	8	.050	.530	166	.040	.838	322
USA18-12POS_XPVC	12	.060	.657	243	.040	.985	446
USA18-16POS_XPVC	16	.060	.726	304	.050	1.054	524
USA18-24POS_XPVC	24	.060	.889	435	.050	1.237	697
USA18-36POS_XPVC	36	.070	1.038	633	.050	1.386	931
USA18-50POS_XPVC	50	.070	1.193	845	.050	1.541	1180
16 AWG							
USA16-01POS_XPVC	1	.035	.253	43	.035	.551	133
USA16-02POS_XPVC	2	.040	.386	81	.040	.694	205
USA16-04POS_XPVC	4	.050	.464	131	.040	.772	272
USA16-06POS_XPVC	6	.050	.550	184	.050	.878	362
USA16-08POS_XPVC	8	.050	.594	228	.050	.922	416
USA16-12POS_XPVC	12	.060	.736	337	.050	1.064	559
USA16-16POS_XPVC	16	.060	.816	426	.050	1.164	671
USA16-24POS_XPVC	24	.070	1.058	639	.050	1.376	935
USA16-36POS_XPVC	36	.070	1.172	902	.050	1.520	1232
USA16-50POS_XPVC	50	.080	1.371	1239	.050	1.719	1617

Replace PVC in the part number with AIA for Aluminum Interlocked Armor. Replace PVC in the part number with SWA for Steel Served Wire Armor.

Jackets: KX – yellow jacket, EX – purple jacket, JX – black jacket, NX – orange jacket, SX – green jacket, TX – blue jacket

Solid conductors are standard; stranded is available upon request. 300V is standard; 600V is available upon request.

INSTRUMENTATION



- **Pairs**
- **XLP**
- **PVC**
- **SPOS**
- **Type PLTC/ITC**
- **300V**

PRODUCT CONSTRUCTION

Conductor: Solid thermocouple extension alloy conductors per ANSI MC96.1. Stranded thermocouple extension alloys available upon request.

Insulation: 105°C PVC. Minimum average insulation thickness for 20, 18 and 16 AWG is .0015 in. VW-1 rated conductors are available upon request.

Shield: Pairs are shielded with 100% coverage aluminum/polyester tape and include a tinned copper drain wire. Aluminum/polyester tape thickness of .00135 in. Overall shielded designs with copper tape or braided tinned copper are also available.

Jacket: 105°C FR PVC, sunlight-resistant, thickness per UL 13 and UL 2250, footage sequentially printed. Suitable for -70°C environment. Black 90°C FR, sunlight-resistant Thermoset Chlorosulfonated Polyethylene (CSPE), commonly referred to as Hypalon®, rated Oil Res I and Oil Res II. Thermocouple extension cables use the ANSI color corresponding to the thermocouple extension alloy type contained in the construction. Additional colors are available upon request.

APPLICATIONS

UL listed 300V Power Limited Tray Cable (PLTC)/Instrumentation Tray Cable (ITC) to UL 13 and UL 2250 for use in Class I, Zone 2 and Class II, Division 2 industrial hazardous locations per NEC.

FEATURES

Sunlight-resistant. Overall cable rated 105°C per UL.

COMPLIANCES

Flame Test: UL 1685 Vertical Flame Test. IEEE 383. IEEE 1202.

		UNARMORED			INTERLOCKED ALUMINUM ARMOR		
USAWC PART #	# of Pairs	Jacket Thickness (Inches)	Nominal OD (Inches)	Weight (lbs./1000 ft.)	Jacket Thickness (Inches)	Nominal OD (Inches)	Weight (lbs./1000 ft.)
20 AWG							
USA20-01POS_XXCPE	1	.035	.215	26	.040	.523	113
USA20-02SPOS_XXCPE	2	.040	.344	60	.050	.672	184
USA20-04SPOS_XXCPE	4	.040	.393	85	.050	.721	225
USA20-06SPOS_XXCPE	6	.050	.487	128	.050	.815	290
USA20-08SPOS_XXCPE	8	.050	.524	157	.050	.852	329
USA20-12SPOS_XXCPE	12	.050	.649	231	.050	.977	432
USA20-16SPOS_XXCPE	16	.060	.717	288	.050	1.044	505
USA20-24SPOS_XXCPE	24	.060	.877	410	.050	1.225	669
USA20-36SPOS_XXCPE	36	.070	1.024	597	.050	1.372	891
USA20-50SPOS_XXCPE	50	.070	1.177	794	.050	1.525	1125
18 AWG							
USA18-01POS_XXCPE	1	.035	.231	32	.050	.559	134
USA18-02SPOS_XXCPE	2	.040	.372	74	.050	.700	209
USA18-04SPOS_XXCPE	4	.050	.448	117	.050	.775	270
USA18-06SPOS_XXCPE	6	.050	.530	165	.050	.858	338
USA18-08SPOS_XXCPE	8	.050	.571	204	.050	.899	386
USA18-12SPOS_XXCPE	12	.060	.709	302	.050	1.036	517
USA18-16SPOS_XXCPE	16	.060	.784	380	.050	1.132	617
USA18-24SPOS_XXCPE	24	.070	.987	568	.050	1.335	854
USA18-36SPOS_XXCPE	36	.070	1.125	799	.050	1.473	1118
USA18-50SPOS_XXCPE	50	.080	1.316	1097	.060	1.684	1493
16 AWG							
USA16-01POS_XXCPE	1	.035	.253	42	.050	.581	149
USA16-02SPOS_XXCPE	2	.050	.432	106	.050	.760	255
USA16-04SPOS_XXCPE	4	.050	.495	159	.050	.823	323
USA16-06SPOS_XXCPE	6	.050	.590	226	.050	.917	413
USA16-08SPOS_XXCPE	8	.060	.657	297	.050	.985	500
USA16-12SPOS_XXCPE	12	.060	.791	422	.050	1.139	661
USA16-16SPOS_XXCPE	16	.060	.877	535	.050	1.225	795
USA16-24SPOS_XXCPE	24	.070	1.106	804	.050	1.454	1119
USA16-36SPOS_XXCPE	36	.070	1.264	1143	.050	1.612	1495
USA16-50SPOS_XXCPE	50	.080	1.479	1575	.060	1.647	2013

Replace CPE in the part number with AIA for Aluminum Interlocked Armor. Replace CPE in the part number with SWA for Steel Served Wire Armor.

Jackets: KX – yellow jacket, EX – purple jacket, JX – black jacket, NX – orange jacket, SX – green jacket, TX – blue jacket

Solid conductors are standard; stranded is available upon request. 300V is standard; 600V is available upon request

PORTABLE CORD



- ▶ **Type DLO**
- ▶ **Type RHH-RHW-2**
- ▶ **EPR/XL-CPE**
- ▶ **600V – 2kV**

PRODUCT CONSTRUCTION

Conductor: 14 AWG through 1111.1 kcmil Class I, fully annealed, flexible, stranded, tin-coated copper per AAR 589.

Insulation: Flame-retardant, cross-linked Ethylene Propylene (EP) with separator tape over the conductor to facilitate stripping.

Jacket: Black, flame-retardant, sunlight-, ozone- and oil resistant, lead-free Cross-linked Chlorinated Polyethylene (XL-CPE). Other jacket colors available upon request.

APPLICATIONS

For use up to 2 kV as power cables in wind turbine generator applications per UL Subject 6140. Also for use in diesel electric locomotives, mining and earth-moving equipment, and general purpose use as flexible power leads in cable trays (sizes 1/0 AWG and larger).

FEATURES

Resists oil, heat, flame, gear lubricants, ozone and sunlight. Designed to withstand continuous flexing. 90°C wet or dry temperature rating. Flexible tinned copper stranding.

COMPLIANCES

Industry: Type RHH/RHW-2 per UL 44, UL File #E90494. c(UL)US Type RW90 per CSA C.22.2-38, UL File #E90494. ICEA S-95-658/NEMA WC70. For CT Use on 1/0 AWG and larger in accordance with NEC®. Accepted for listing as flame resistant by MSHA. RoHS compliant.

Flame Test: UL 2556 VW-1, IEEE 1202/CSA FT4 for sizes 1/0 AWG and larger.

USAWC Part #	Size (AWG or kcmil)	Cond. Strand	Nominal Insulation Thickness		Nominal O.D.		Current Amps		Approx. Net Wt.* (lbs./1000 ft.)
			(Inches)	(mm)	(Inches)	(mm)	(1)	(2)	
USA14-01DLO	14	19/0.0147	0.045	1.1	0.20	5.1	25	35	30
USA12-01DLO	12	19/0.0185	0.045	1.1	0.22	5.6	30	40	39
USA10-01DLO	10	27/24	0.045	1.1	0.25	6.4	40	55	56
USA8-01DLO	8	37/24	0.055	1.4	0.33	8.3	55	80	87
USA6-01DLO	6	61/24	0.060	1.5	0.38	9.7	75	105	131
USA4-01DLO	4	105/24	0.060	1.5	0.46	11.7	95	140	202
USA2-01DLO	2	154/24	0.060	1.5	0.51	13.0	130	190	285
USA1-01DLO	1	224/24	0.080	2.0	0.64	16.3	150	220	417
USA1/0-01DLO	1/0	280/24	0.080	2.0	0.70	17.8	170	260	494
USA2/0-01DLO	2/0	329/24	0.080	2.0	0.73	18.5	195	300	587
USA3/0-01DLO	3/0	456/24	0.080	2.0	0.80	20.3	225	350	718
USA4/0-01DLO	4/0	551/24	0.080	2.0	0.84	21.3	260	405	845
USA262-01DLO	262.6	650/24	0.090	2.3	0.94	23.9	296	467	1050
USA313-01DLO	313.3	777/24	0.090	2.3	1.00	25.3	326	522	1185
USA373-01DLO	373.7	925/24	0.090	2.3	1.06	26.9	362	591	1384
USA444-01DLO	444.4	1110/24	0.090	2.3	1.11	28.2	400	652	1634
USA535-01DLO	535.3	1332/24	0.090	2.3	1.20	30.5	445	728	1925
USA646-01DLO	646.4	1609/24	0.090	2.3	1.29	32.8	493	815	2307
USA777-01DLO	777.7	1924/24	0.090	2.3	1.38	35.1	546	904	2728
USA929-01DLO	929.9	2318/24	0.090	2.3	1.56	39.6	602	1014	3570
USA1111-01DLO	1111.1	2745/24	0.115	2.9	1.77	44.9	635	1115	4232

Dimensions and weights are nominal and are subject to industry tolerances

(1) Ampacities based on 90°C conductor and 30°C ambient temperature, based on the National Electrical Code® for not more than three current-carrying conductors in raceway, cable or earth.

(2) Ampacities based on single-conductor in free air, 90°C conductor temperature and an ambient air temperature of 30°C, in accordance with the National Electrical Code®.

*Actual shipping weight may vary.

PORTABLE CORD



- **Type W 2kV**
- **Single Conductor**
- **Type RHH/RHW 600V**
- **EPDM**

PRODUCT CONSTRUCTION

Conductor: 8 AWG through 500 kcmil fully annealed, stranded, bare copper.

Insulation: Premium-grade 90°C EPDM.

Cable Reinforcement: An open polyester braid reinforcement is applied between the insulation and jacket for mechanical strength.

Jacket: 90°C, black. Temperature range: -40°C to +90°C. Voltage rating: 600V–Type RHH/RHW; 2kV –Type W.

APPLICATIONS

For use in portable power systems and entertainment industry activities such as theater, television, films, night clubs, mobile communication vans, spotlights and sound systems. Also for use in similar applications that require permanent or temporary power. Can be used in the permanent wiring of 600V power supplies, hoists, cranes and other applications where flexible power leads must be installed in conduit or raceways.

FEATURES

Water and sunlight resistant. Designed to withstand severe environmental conditions. Withstands exposure to oil, acids, alkalies, heat, flame, moisture and chemicals. Meets or exceeds flame test requirements of MSHA and UL.

COMPLIANCES

Industry: UL Type W, UL Type RHH or RHW, MSHA approved, RoHS compliant

USAWC Part #	Size (AWG or kcmil)	No. of Cond.	Cond. Strand	Nominal Cond. O.D.		Nominal Ins. Thickness		Nominal O.D.		Current Amps		Approx. Net Wt.* (lbs./1000 ft.)
				(Inches)	(mm)	(Inches)	(mm)	(Inches)	(mm)	(1)	(2)	
Type W 2kV (UL) and Type RHH/RHW 600V (UL)												
USA8-01W	8	1	133	0.167	4.24	0.070	1.78	0.485	12.32	55	80	150
USA6-01W	6	1	259	0.210	5.33	0.070	1.78	0.565	14.35	75	105	214
USA4-01W	4	1	259	0.245	6.22	0.070	1.78	0.605	15.37	95	140	277
USA2-01W	2	1	259	0.334	8.48	0.070	1.78	0.680	17.27	130	190	387
USA1-01W	1	1	259	0.375	9.53	0.090	2.29	0.765	19.43	150	220	485
USA1/0-01W	1/0 [†]	1	259	0.385	9.78	0.090	2.29	0.810	20.57	170	260	563
USA2/0-01W	2/0 [†]	1	259	0.475	12.07	0.090	2.29	0.885	22.48	195	300	679
USA3/0-01W	3/0 [†]	1	259	0.480	12.19	0.090	2.29	0.930	23.62	225	350	809
USA4/0-01W	4/0 [†]	1	259	0.570	14.48	0.090	2.29	0.980	24.89	260	405	973
USA250-01W	250 [†]	1	627	0.615	15.62	0.105	2.67	1.045	26.54	290	455	1155
USA35001W	350 [†]	1	855	0.725	18.42	0.105	2.67	1.145	29.08	350	570	1492
USA500-01W	500 [†]	1	1235	0.880	22.35	0.105	2.67	1.310	33.27	430	700	2048

(1) Ampacities based on 90°C conductor and 30°C ambient temperature based on Table 310-16 in the National Electrical Code® for RHH/RHW with not more than three current-carrying conductors in raceway, cable or earth.

(2) Ampacities based on 90°C conductor and 30°C ambient temperature based on Table 310-17 and Table 400.5(B) in the National Electrical Code® for single-conductor cables.

*Actual shipping weight may vary.

[†]Designated for CT use.

PORTABLE CORD



- **Type W**
- **Multi-Conductor**
- **EPDM**
- **600V – 2kV**

PRODUCT CONSTRUCTION

Conductor: 8 AWG through 500 kcmil, fully annealed, stranded, bare copper.

Insulation: Premium-grade, color-coded 90°C EPDM.

Jacket: 90°C, black. Temperature range: -40°C to +90°C.

COLOR CODE*

2 Conductors: Black, white

3 Conductors: Black, white, green

4 Conductors: Black, white, red, green

5 Conductors: Black, white, red, green

APPLICATIONS

For use in industrial and light- to medium-duty mining applications; heavy-duty service as power supply cable; grounded and ungrounded AC systems; mobile and portable electrical equipment; motor and battery leads; two-conductor cables (DC or AC single-phase systems where grounding is not required); three-conductor cables (use on AC systems where no grounding is required or on DC systems with one conductor for grounding); four-conductor cables (use on two- or three-phase AC systems with one conductor used for grounding; five-conductor cables (use in applications where separating the system neutral from the frame ground is required).

FEATURES

Sunlight resistant. Designed to withstand severe environmental conditions and exposure to oil, acid, alkalis, heat, moisture and most chemicals. Excellent impact resistance. Cable core bound for superior flexibility and toughness. Rope lay stranding for maximum flex life.

COMPLIANCES

Industry: CSA, UL Type W, MSHA approved, RoHS compliant

USAWC Part #	Size (AWG or kcmil)	No. of Cond.	Cond. Strand	Nominal Conductor O.D.		Nominal Insulation Thickness		Nominal O.D.		Current Amps [†]	Approx. Net Wt. Lbs./M**
				(Inches)	(mm)	(Inches)	(mm)	(Inches)	(mm)		
Two Conductor – Type W – 2kV											
USA8-02W	8	2	133	0.160	4.06	0.060	1.52	0.770	19.56	74	325
USA6-02W	6	2	259	0.198	5.03	0.060	1.52	0.910	23.11	99	470
USA4-02W	4	2	259	0.245	6.22	0.060	1.52	1.020	25.91	130	620
USA2-02W	2	2	259	0.297	7.54	0.080	2.03	1.210	30.73	174	935
USA1-02W	1	2	259	0.353	8.97	0.080	2.03	1.370	34.80	202	1305
USA1/0-02W	1/0	2	259	0.385	9.78	0.080	2.03	1.435	36.45	234	1555
USA2/0-02W	2/0	2	259	0.442	11.23	0.080	2.03	1.555	39.50	271	1860
USA3/0-02W	3/0	2	259	0.480	12.19	0.080	2.03	1.670	42.42	313	2230
USA4/0-02W	4/0	2	259	0.555	14.10	0.080	2.03	1.815	46.10	361	2655
Three Conductor – Type W – 2kV											
USA8-03W	8	3	133	0.160	4.06	0.060	1.52	0.925	23.50	74	470
USA6-03W	6	3	259	0.198	5.03	0.060	1.52	0.995	25.27	99	625
USA4-03W	4	3	259	0.245	6.22	0.060	1.52	1.095	27.81	130	810
USA2-03W	2	3	259	0.297	7.54	0.080	2.03	1.285	32.64	174	1190
USA1-03W	1	3	259	0.353	8.97	0.080	2.03	1.445	36.70	202	1655
USA1/0-03W	1/0	3	259	0.385	9.78	0.080	2.03	1.555	39.50	234	1965
USA2/0-03W	2/0	3	259	0.442	11.23	0.080	2.03	1.670	42.42	271	2350
USA3/0-03W	3/0	3	259	0.480	12.19	0.080	2.03	1.815	46.10	313	2890
USA4/0-03W	4/0	3	259	0.555	14.10	0.080	2.03	1.930	49.02	361	3285
USA250-03W	250	3	627	0.615	15.62	0.095	2.41	2.390	60.71	402	5070
USA350-03W	350	3	855	0.725	18.42	0.095	2.41	2.680	68.07	495	6570
USA500-03W	500	3	1235	0.880	22.35	0.095	2.41	3.030	76.96	613	8700
Four Conductor – Type W – 2kV											
USA8-04W	8	4	133	0.160	4.06	0.060	1.52	0.980	24.89	65	615
USA6-04W	6	4	259	0.198	5.03	0.060	1.52	1.070	27.18	87	800
USA4-04W	4	4	259	0.245	6.22	0.060	1.52	1.210	30.73	114	1040
USA2-04W	2	4	259	0.297	7.54	0.080	2.03	1.435	36.45	152	1580
USA1-04W	1	4	259	0.353	8.97	0.080	2.03	1.595	40.51	177	2045
USA1/0-04W	1/0	4	259	0.385	9.78	0.080	2.03	1.705	43.31	205	2430
USA2/0-04W	2/0	4	259	0.442	11.23	0.080	2.03	1.845	46.86	237	2950
USA3/0-04W	3/0	4	259	0.480	12.19	0.080	2.03	1.965	49.91	274	3430
USA4/0-04W	4/0	4	259	0.555	14.10	0.080	2.03	2.145	54.48	316	3885
Five-Conductor – Type W – 2kV											
USA8-05W	8	5	133	0.160	4.06	0.060	1.52	1.030	26.16	52	650
USA6-05W	6	5	259	0.198	5.03	0.060	1.52	1.170	29.72	69	915
USA4-05W	4	5	259	0.245	6.22	0.060	1.52	1.360	34.54	91	1320
USA2-05W	2	5	259	0.297	7.54	0.080	2.03	1.595	40.51	121	1925
USA1-05W	1	5	259	0.353	8.97	0.080	2.03	1.820	46.23	141	2675
USA1/0-05W	1/0	5	259	0.385	0.78	0.080	2.03	1.900	48.26	164	2885
USA2/0-05W	2/0	5	259	0.442	11.23	0.080	2.03	2.060	52.32	189	3630
USA3/0-05W	3/0	5	259	0.480	12.19	0.080	2.03	2.260	57.40	219	4900
USA4/0-05W	4/0	5	259	0.555	14.10	0.080	2.03	2.460	62.48	252	5980

[†]Ampacities based on 90°C conductor and 30°C ambient temperature per Table 400.5(B) of the National Electrical Code[®].

*Green conductor for grounding only. **Actual shipping weight may vary

PORTABLE CORD



- **Type G-GC**
- **3 and 4 Conductor**
- **EPDM**
- **600V – 2kV**

PRODUCT CONSTRUCTION

Conductor: 8 AWG through 500 kcmil fully annealed, stranded, bare copper.

Insulation: Premium-grade, color-coded 90°C EPDM. Insulated grounds and ground checks.

Jacket: 90°C, black. Temperature range: -40°C to +90°C.

COLOR CODE*

3 Conductors: Black, white, red

4 Conductors: Black, white, red, orange

APPLICATIONS

For use in industrial and light- to medium-duty mining applications; heavy-duty service as power supply cable; mobile and portable electrical equipment; three- and four-conductor cables (use on three-phase AC systems where grounding is required).

FEATURES

Sunlight resistant. Designed to withstand exposure to oil, acids, alkalis, heat, moisture and most chemicals. Excellent impact and abrasion resistance.

Indent-printed for easy identification. Non-wicking rubber fillers. Rope lay stranding for maximum flex life. Cable core bound for superior flexibility and toughness.

COMPLIANCES

Industry: CSA, UL Type G, G-GC, MSHA approved, RoHS compliant.

USAWC Part #	Size (AWG or kcmil)	No. of Cond.	Cond. Strand	Nominal Cond. O.D.		Yellow Ground Check (AWG)	Green Ground Check (AWG)	Nominal Insulation Thickness		Nominal O.D.		Current Amps [†]	Approx. Net Wt.* (lbs./1000 ft.)
				Nominal Cond. O.D.				Nominal Insulation Thickness		Nominal O.D.			
				(Inches)	(mm)			(Inches)	(mm)	(Inches)	(mm)		
Three Conductor – Type G-GC – 2kV													
USA8-03GGC	8	3	133	0.160	4.06	10	2#10	0.060	1.52	0.965	24.51	65	600
USA6-03GGC	6	3	259	0.198	5.03	10	2#10	0.060	1.52	1.020	25.91	87	770
USA4-03GGC	4	3	259	0.245	6.22	10	2#8	0.060	1.52	1.125	28.58	114	1005
USA2-03GGC	2	3	259	0.297	7.54	10	2#7	0.080	2.03	1.315	33.40	152	1480
USA1-03GGC	1	3	259	0.353	8.97	8	2#6	0.080	2.03	1.445	36.70	177	1815
USA1/0-03GGC	1/0	3	259	0.385	9.78	8	2#5	0.080	2.03	1.570	39.88	205	2205
USA2/0-03GGC	2/0	3	259	0.442	11.23	8	2#4	0.080	2.03	1.660	42.16	237	2545
USA3/0-03GGC	3/0	3	259	0.480	12.19	8	2#3	0.080	2.03	1.810	45.97	274	3230
USA4/0-03GGC	4/0	3	259	0.555	14.10	8	2#2	0.080	2.03	1.920	48.77	316	3675
USA250-03GGC	250	3	627	0.615	15.62	8	2#2	0.095	2.41	2.390	60.71	352	6060
USA350-03GGC	350	3	855	0.725	18.42	8	2#1/0	0.095	2.41	2.680	68.07	433	7400
USA500-03GGC	500	3	1235	0.880	22.35	8	2#2/0	0.095	2.41	3.030	76.96	536	10100

USAWC Part #	Size (AWG or kcmil)	No. of Cond.	Cond. Strand			Green Ground Check AWG Size					Current Amps [†]	Approx. Net Wt.* (lbs./1000 ft.)
				Nominal Cond., O.D.			Nominal Ins. Thickness		Nominal O.D.			
				(Inches)	(mm)		(Inches)	(mm)	(Inches)	(mm)		
Four Conductor – Type G – 600V/2kV												
USA8-04GGC	8	4	133	0.160	4.06	4#12	0.060	1.52	1.045	26.54	52	690
USA6-04GGC	6	4	259	0.198	5.03	4#12	0.060	1.52	1.125	28.58	70	880
USA4-04GGC	4	4	259	0.245	6.22	4#10	0.060	1.52	1.225	31.12	91	1160
USA2-04GGC	2	4	259	0.297	7.54	4#9	0.080	2.03	1.435	36.45	122	1720
USA1-04GGC	1	4	259	0.353	8.97	4#8	0.080	2.03	1.595	40.51	142	2200
USA1/0-04GGC	1/0	4	259	0.385	9.78	4#7	0.080	2.03	1.730	43.94	164	2705
USA2/0-04GGC	2/0	4	259	0.442	11.23	4#6	0.080	2.03	1.855	47.12	190	3190
USA3/0-04GGC	3/0	4	259	0.480	12.19	4#5	0.080	2.03	2.040	51.82	219	4005
USA4/0-04GGC	4/0	4	259	0.555	14.10	4#4	0.080	2.03	2.145	54.48	253	4560

[†] Ampacities based on 90°C conductor and 30°C ambient temperature based on Table 400.5(B) of the National Electrical Code®.

*Actual shipping may vary.

PORTABLE CORD



- ▶ **Welding Cable**
- ▶ **Class K**
- ▶ **30 AWG Stranding**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 6 AWG through 500 kcmil fully annealed, stranded, bare copper, Class K.

Jacket: Premium-grade 90°C EPDM, black or red. Temperature range: -40°C to +90°C.

APPLICATIONS

For use with secondary voltage resistance welding leads and power supply applications not exceeding 600V AC.

FEATURES

Good flexibility, abrasion resistance, good color retention.

COMPLIANCES

Industry: RoHS compliant

USAWC Part #	Size (AWG)	Cond. Strand	Nominal O.D.		Approx. Net Wt.* (lbs./1000 ft.)	Standard Carton
			(Inches)	(mm)		
Class K Welding Cable – 600V – 30 AWG Stranding						
USA6-01WELD	6	259/30	0.380	9.65	135	250'
USA4-01WELD	4	406/30	0.400	10.16	172	250'
USA2-01WELD	2	646/30	0.465	11.81	260	250'
USA1-01WELD	1	812/30	0.495	12.57	317	250'
USA1/0-01WELD	1/0	1025/30	0.560	14.22	400	250'
USA2/0-01WELD	2/0	1274/30	0.615	15.62	487	250'
USA3/0-01WELD	3/0	1613/30	0.670	17.02	605	250'
USA4/0-01WELD	4/0	2029/30	0.750	19.05	827	250'
USA250-01WELD	250 kcmil	2496/30	0.830	21.08	976	250'
USA350-01WELD	350 kcmil	3441/30	0.960	24.38	1338	250'
USA500-01WELD	500 kcmil	5054/30	1.200	30.48	1995	250'

*Actual shipping weight may vary.

Welding Cable Ampacities Single Conductor

Required Cable Sizes: For Welding Cable Application

Length is in feet for total circuit for secondary voltages only – do not use this table for 600V inline applications.							
Amps	100'	150'	200'	250'	300'	350'	400'
100	4	4	2	2	1	1/0	1/0
150	4	2	1	1/0	2/0	3/0	3/0
200	2	1	1/0	2/0	3/0	4/0	4/0
250	1	1/0	2/0	3/0	4/0		
300	1/0	2/0	3/0	4/0			
350	1/0	3/0	4/0				
400	2/0	3/0					
450	2/0	4/0					
500	3/0	4/0					
550	3/0	4/0					
600	4/0						
Required cable sizes shown in AWG numbers.							

The total circuit length includes both welding and ground leads (based on 4-volt drop) 60% duty cycle. These values are based on a copper temperature of 60°C (140°F), an ambient temperature of 40°C (104°F) and yield load factors from approximately 32% for the 2 AWG cable to approximately 23% for the 3/0 AWG cable, and higher for smaller sizes. The sizes of cables generally used range from 2 AWG to 3/0 AWG. In actual service, the load factor may be much higher than indicated without overheating the cable, as the ambient temperature will generally be substantially lower than 40°C.

Suggested Ampacities for 600V Inline Applications

AWG or kcmil	Amperes	AWG	Amperes
500 kcmil	695	1/0	190
350 kcmil	552	1	160
250 kcmil	445	2	140
4/0	310	4	100
3/0	265	6	75
2/0	223		

Ampacities for portable cable, continuous duty (ambient temperature of 40°C).

May not be suitable for all installations per National Electrical Code®.

PORTABLE CORD



- **Type SOOW**
- **Multi-Conductor**
- **EPDM**
- **600V**

PRODUCT CONSTRUCTION

Conductor: 18 AWG and 16 AWG fully annealed, stranded, bare copper per ASTM B-174.

Insulation: Premium-grade, color-coded 90°C EPDM. See color chart.

Jacket: Black. Temperature range: -40°C to +90°C.

APPLICATIONS

For use with control circuits; tools; and heavy industrial, processing and construction equipment.

FEATURES

Resistant to oil, solvents, flame, abrasion, ozone, sunlight (UV), water and weather. Extra-flexible stranding. 90°C-rated conductors and jacket.

UL listed and CSA certified for indoor and outdoor use.

COMPLIANCES

Industry: UL flexible cord (UL Subject 62, CSA Flexible Cord (C22.2-49), MSHA approved, RoHS compliant

USAWC Part #	Size (AWG)	No. of Conductors	Cond. Strand	Nominal Insulation Thickness		Nominal O.D.		Current Amps [†]	Approx. Net Wt.* (lbs./1000 ft.)
				(Inches)	(mm)	(Inches)	(mm)		
Type SOOW, Non-UL – 600V									
USA18-05SOOW	18	5	16/30	0.030	0.76	0.465	11.81	5.6	141
USA18-06SOOW	18	6	16/30	0.030	0.76	0.495	12.57	5.6	152
USA18-07SOOW	18	7	16/30	0.030	0.76	0.520	13.21	5.6	172
USA18-08SOOW	18	8	16/30	0.030	0.76	0.530	13.46	4.9	177
USA18-10SOOW	18	10	16/30	0.030	0.76	0.595	15.11	4.9	225
USA18-12SOOW	18	12	16/30	0.030	0.76	0.600	15.24	3.5	240
USA18-14SOOW	18	14	16/30	0.030	0.76	0.630	16.00	3.5	265
USA18-16SOOW	18	16	16/30	0.030	0.76	0.700	17.78	3.5	310
USA18-18SOOW	18	18	16/30	0.030	0.76	0.760	19.30	3.5	345
USA18-20SOOW	18	20	16/30	0.030	0.76	0.795	20.19	3.5	382
USA18-22SOOW	18	22	16/30	0.030	0.76	0.805	20.45	3.1	400
USA18-24SOOW	18	24	16/30	0.030	0.76	0.850	21.59	3.1	451
USA18-27SOOW	18	27	16/30	0.030	0.76	0.865	21.97	3.1	475
USA18-30SOOW	18	30	16/30	0.030	0.76	0.915	23.24	3.1	533
USA16-05SOOW	16	5	26/30	0.030	0.76	0.495	12.57	8.0	167
USA16-06SOOW	16	6	26/30	0.030	0.76	0.520	13.21	8.0	182
USA16-07SOOW	16	7	26/30	0.030	0.76	0.540	13.72	8.0	194
USA16-08SOOW	16	8	26/30	0.030	0.76	0.575	14.61	7.0	218
USA16-09SOOW	16	9	26/30	0.030	0.76	0.600	15.24	7.0	243
USA16-10SOOW	16	10	26/30	0.030	0.76	0.620	15.75	5.0	255
USA16-12SOOW	16	12	26/30	0.030	0.76	0.660	16.76	5.0	296
USA16-14SOOW	16	14	26/30	0.030	0.76	0.730	18.54	5.0	352
USA16-16SOOW	16	16	26/30	0.030	0.76	0.740	18.80	5.0	383
USA16-18SOOW	16	18	26/30	0.030	0.76	0.770	19.56	5.0	417
USA16-20SOOW	16	20	26/30	0.030	0.76	0.810	20.57	5.0	457
USA16-22SOOW	16	22	26/30	0.030	0.76	0.900	22.86	4.5	510
USA16-24SOOW	16	24	26/30	0.030	0.76	0.925	23.50	4.5	563
USA16-26SOOW	16	26	26/30	0.030	0.76	0.965	24.51	4.5	611
USA16-30SOOW	16	30	26/30	0.030	0.76	1.010	25.65	4.5	767

[†]Values shown are for current-carrying conductors. A grounding conductor, or one which carries only the unbalance current from other conductors, is NOT counted in determining current-carrying capacity. Ampacities are based on NEC Table 400.5(A)

*Actual shipping weight may vary.

Color Code Chart

No. of Cond.	Color	Tracer	No. of Cond.	Color	Tracer	No. of Cond.	Color	Tracer
1	Black	—	8	Red	Black	15	Blue	White
2	White	—	9	Green	Black	16	Black	Red
3	Red	—	10	Orange	Black	17	White	Red
4	Green	—	11	Blue	Black	18	Orange	Red
5	Orange	—	12	Black	White	19	Blue	Red
6	Blue	—	13	Red	White	20	Red	Green
7	White	Black	14	Green	White	21	Orange	Green

Note: Colors repeat after 21 conductors.

PORTABLE CORD



- **Type SOOW**
- **Multi-Conductor**
- **EPDM**
- **600V**

PRODUCT CONSTRUCTION

Conductor: 14 through 10 AWG fully annealed, stranded, bare copper per ASTM B174.

Insulation: Premium-grade, color-coded 90°C EPDM. See color chart.

Jacket: Black. Temperature range: -40°C to +90°C.

APPLICATIONS

For use with control circuits and tools plus heavy industrial, processing and construction equipment.

FEATURES

Resistant to oil, solvents, flame, abrasion, ozone, sunlight (UV), water and weather. Extra-flexible stranding. 90°C-rated conductors and jacket.

UL listed and CSA certified for indoor and outdoor use.

COMPLIANCES

Industry: UL flexible cord (UL Subject 62). CSA Flexible Cord (C22.2-49). MSHA approved. RoHS compliant.

USAWC Part #	Size (AWG)	No. of Conductors	Cond. Strand	Nominal Insulation Thickness		Nominal O.D.		Current Amps [†]	Approx. Net Wt. (lbs./1000 ft.)*
				(Inches)	(mm)	(Inches)	(mm)		
Type SOOW – 600V – UL/CSA									
USA14-05SOOW	14	5	41/30	0.045	1.14	0.645	16.38	12.0	269
USA14-06SOOW	14	6	41/30	0.045	1.14	0.710	18.03	12.0	317
USA14-07SOOW	14	7	41/30	0.045	1.14	0.710	18.03	12.0	347
USA14-08SOOW	14	8	41/30	0.045	1.14	0.760	19.30	10.5	430
USA14-09SOOW	14	9	41/30	0.045	1.14	0.830	21.08	10.5	417
USA14-10SOOW	14	10	41/30	0.045	1.14	0.820	20.83	10.5	427
USA14-12SOOW	14	12	41/30	0.045	1.14	0.855	21.72	7.5	493
USA14-14SOOW	14	14	41/30	0.045	1.14	1.000	25.40	7.5	601
USA14-16SOOW	14	16	41/30	0.045	1.14	1.030	26.16	7.5	678
USA14-18SOOW	14	18	41/30	0.045	1.14	1.100	27.94	7.5	720
USA14-20SOOW	14	20	41/30	0.045	1.14	1.120	28.45	7.5	806
USA14-24SOOW	14	24	41/30	0.045	1.14	1.260	32.00	6.7	1003
USA14-28SOOW	14	28	41/30	0.045	1.14	1.330	33.78	6.7	1080
USA14-30SOOW	14	30	41/30	0.045	1.14	1.335	33.91	6.0	1153

USA12-05SOOW	12	5	65/30	0.045	1.14	0.715	18.16	16.0	333
USA12-06SOOW	12	6	65/30	0.045	1.14	0.740	18.80	16.0	412
USA12-07SOOW	12	7	65/30	0.045	1.14	0.790	20.07	16.0	465
USA12-08SOOW	12	8	65/30	0.045	1.14	0.825	20.96	14.0	526
USA12-09SOOW	12	9	65/30	0.045	1.14	0.900	22.86	14.0	517
USA12-10SOOW	12	10	65/30	0.045	1.14	1.000	25.40	14.0	649
USA12-12SOOW	12	12	65/30	0.045	1.14	1.010	25.65	10.0	669
USA12-14SOOW	12	14	65/30	0.045	1.14	1.020	25.91	10.0	731
USA12-16SOOW	12	16	65/30	0.045	1.14	1.135	28.83	10.0	933
USA12-18SOOW	12	18	65/30	0.045	1.14	1.175	29.85	10.0	920
USA12-20SOOW	12	20	65/30	0.045	1.14	1.170	29.72	10.0	989
USA12-24SOOW	12	24	65/30	0.045	1.14	1.435	36.45	9.0	1273
USA12-26SOOW	12	26	65/30	0.045	1.14	1.380	35.05	9.0	1324
USA12-27SOOW	12	27	65/30	0.045	1.14	1.455	37.72	9.0	1325
USA12-28SOOW	12	28	65/30	0.045	1.14	1.500	38.10	9.0	1355
USA12-30SOOW	12	30	65/30	0.045	1.14	1.455	36.96	9.0	1492

USA10-05SOOW	10	5	104/30	0.045	1.14	0.770	19.56	20.0	472
USA10-06SOOW	10	6	104/30	0.045	1.14	0.875	22.23	20.0	565
USA10-07SOOW	10	7	104/30	0.045	1.14	0.900	22.86	20.0	552
USA10-08SOOW	10	8	104/30	0.045	1.14	0.935	23.75	17.5	682
USA10-10SOOW	10	10	104/30	0.045	1.14	1.020	25.91	17.5	758
USA10-12SOOW	10	12	104/30	0.045	1.14	1.070	27.18	12.5	871
USA10-16SOOW	10	16	104/30	0.045	1.14	1.230	31.24	12.5	1147
USA10-20SOOW	10	20	104/30	0.045	1.14	1.325	33.66	12.5	1445

[†]Values shown are for current-carrying conductors. A grounding conductor, or one which carries only the unbalance current from other conductors, is NOT counted in determining current-carrying capacity. Ampacities are based on NEC Table 400.5(A).

*Actual shipping weight may vary.

Color Code Chart

No. of Cond.	Color	Tracer	No. of Cond.	Color	Tracer	No. of Cond.	Color	Tracer
1	Black	—	8	Red	Black	15	Blue	White
2	White	—	9	Green	Black	16	Black	Red
3	Red	—	10	Orange	Black	17	White	Red
4	Green	—	11	Blue	Black	18	Orange	Red
5	Orange	—	12	Black	White	19	Blue	Red
6	Blue	—	13	Red	White	20	Red	Green
7	White	Black	14	Green	White	21	Orange	Green

NOTE: Colors repeat after 21 conductors.

PORTABLE CORD



- **Type SOOW**
- **Multi-Conductor**
- **EPDM**
- **600V**

PRODUCT CONSTRUCTION

Conductor: 8 AWG through 2 AWG fully annealed, stranded, bare copper per ASTM B174.

Insulation: Premium-grade, color-coded 90°C EPDM. See color chart.

Jacket: Black. Temperature range: -40°C to +90°C.

APPLICATIONS

For use with portable tools and equipment, motors and associated machinery, and for temporary and portable power.

FEATURES

Ozone, sunlight (UV) and weather resistant. Excellent resistance to oil, moisture and abrasion. High flexibility. Good tensile strength, elongation and aging characteristics.

COMPLIANCES

Industry: MSHA approved, RoHS compliant

USAWC Part #	Size (AWG)	No. of Conductors	Cond. Strand	Nominal Insulation Thickness		Nominal O.D.		Current Amps [†]	Standard Carton	Approx. Net Wt.* (lbs./1000 ft.)
				(Inches)	(mm)	(Inches)	(mm)			
Type SOOW, Non-UL – 600V										
USA8-02SOOW	8	2	65/26	0.050	1.27	0.660	16.76	40	250'	278
USA8-03SOOW	8	3	65/26	0.050	1.27	0.695	17.65	40	250'	343
USA8-04SOOW	8	4	65/26	0.050	1.27	0.760	19.30	35	250'	442
USA8-05SOOW	8	5	65/26	0.050	1.27	0.840	21.34	28	250'	542
USA6-03SOOW	6	3	101/26	0.050	1.27	0.790	20.07	55	250'	482
USA6-04SOOW	6	4	101/26	0.050	1.27	0.865	21.97	45	250'	599
USA6-05SOOW	6	5	101/26	0.050	1.27	0.945	24.00	36	250'	750
USA4-02SOOW	4	2	119/25	0.050	1.27	0.860	21.84	70	250'	515
USA4-03SOOW	4	3	119/25	0.050	1.27	0.915	23.24	70	250'	683
USA4-04SOOW	4	4	119/25	0.050	1.27	1.000	25.40	60	250'	851
USA4-05SOOW	4	5	119/25	0.050	1.27	1.095	27.81	48	250'	1039
USA2-03SOOW	2	3	133/.0211	0.055	1.40	1.085	27.56	95	250'	1003
USA2-04SOOW	2	4	133/.0211	0.055	1.40	1.170	29.72	80	250'	1248
USA2-05SOOW	2	5	133/.0211	0.055	1.40	1.390	35.31	64	250'	1684

[†]Green conductor for grounding only. Ampacities based on NEC Table 400.5(A)

*Actual shipping weight may vary.

No. Cond.	Color
2	Black, white
3	Black, white, green
4	Black, white, red, green
5	Black, white, red, orange, green

PORTABLE CORD



- **Lighting Cable**
- **UL Type SC**
- **CSA Type PPC**
- **600V**

PRODUCT CONSTRUCTION

Conductor: 8 AWG through 4/0 AWG fully annealed, stranded, bare copper per ASTM B172.

Jacket: 105°C, black. Temperature range: -50°C to +105°C.

APPLICATIONS

For use in portable power systems and entertainment industry activities such as theater, television, films, night clubs, mobile communication vans, spotlights and sound systems. Also for use in similar applications that require temporary power.

FEATURES

Resistant to water and sunlight. Designed to withstand severe environmental conditions. Withstands exposure to oil, acids, alkalies, heat, flame, moisture and chemicals. Meets or exceeds flame test requirements of MSHA, CSA and UL. Indent printed.

COMPLIANCES

Industry: UL listed, CSA certified, RoHS compliant

USAWC Part #	Size (AWG)	Nominal Strand	Nominal O.D.		Current Amps [†]	Approx. Net Wt.* (lbs./1000 ft.)
			(Inches)	(mm)		
USA8-01SC	8	168/30	0.385	9.78	80	110
USA6-01SC	6	259/30	0.420	10.67	105	152
USA4-01SC	4	416/30	0.475	12.07	140	215
USA2-01SC	2	655/30	0.520	13.21	190	296
USA1-01SC	1	827/30	0.575	14.61	220	360
USA1/0-01SC	1/0 [†]	1042/30	0.600	15.24	260	424
USA2/0-01SC	2/0 [†]	1316/30	0.645	16.38	300	513
USA3/0-01SC	3/0 [†]	1660/30	0.715	18.16	350	644
USA4/0-01SC	4/0 [†]	2062/30	0.765	19.43	405	824

[†]NEC Table 400-5(A)(2)

*Actual shipping weight may vary.

PORTABLE CORD



- ▶ **Exciter Cable**
- ▶ **EPR**
- ▶ **CPE**
- ▶ **2kV**

PRODUCT CONSTRUCTION

Conductor: Extra-flexible, stranded, bare copper conductor with mylar separator.

Jacket: CPE jacket, surface printed, 90°C.

APPLICATIONS

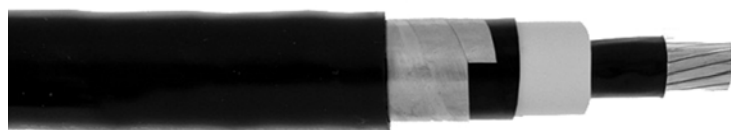
For furnishing direct current to the rotating field winding of a synchronous generator.

COMPLIANCES

Industry: ASTM B3, ASTM B172

USAWC Part #	Conductor Stranding	Approx. Size AWG/MCM	Conductor Diameter (Inches)	Insulation Thickness (Inches)	Jacket Thickness (Inches)	Nominal Diameter (Inches)	Net Wt. (lbs./1000 ft.)	Copper Wt. (lbs./1000 ft.)
USA1550-012KVDLO	15561/30	1550	1.680	0.140	0.095	2.15	6050	5015

MEDIUM VOLTAGE POWER



- **1 Conductor**
- **EPR**
- **PVC**
- **Type MV-105**
- **5kV and 8kV**

PRODUCT CONSTRUCTION

Conductor: 4 AWG through 1000 kcmil annealed bare copper compact Class B strand.

Extruded Strand Shield (ESS): Extruded thermoset semi-conducting stress-control layer over conductor.

Insulation: Ethylene Propylene Rubber (EPR) insulation, colored to contrast with the black conducting shield layers.

Extruded Insulation Shield (EIS): Thermoset semi-conducting polymeric layer free stripping from insulation.

Metallic Shield: 5 mil annealed copper tape with an overlap of 25%.

Jacket: Lead-free, flame-retardant moisture- and sunlight-resistant Polyvinyl Chloride (PVC). Also available: (CPE) jacket.

APPLICATIONS

For use in aerial, conduit, open tray and underground duct installations. For use in wet or dry locations when installed in accordance with the NEC.

Can be used in direct burial if installed in a system with a ground conductor that is in close proximity and conforms with NEC 250.4(A)(5).

Superior performance in petrochemical plants, pulp and paper mills, sewage and water treatment plants, environmental protection systems, railroads, mines, utility power generating stations, steel mills, textile plants and other industrial three-phase applications.

FEATURES

Rated at 105°C. Excellent heat, flame and moisture resistance. Outstanding corona resistance. High dielectric strength. Low moisture absorption.

Electrically stable under stress. Low dielectric loss. Chemical-resistant. Meets cold bend test at -35°C. loss.

COMPLIANCES

Industry: National Electrical Code (NEC). UL 1072. ICEA S-93-639/NEMA WC74. ICEA S-97-682. AEIC CS8. UL listed as type MV-105 for use in accordance with the NEC. Sizes 1/0 AWG and larger are listed and marked "Sunlight-Resistant FOR CT USE" in accordance with NEC.

Flame Test: UL 1685 (Sizes 1/0 AWG and larger) UL Flame Exposure Test. IEEE 1202 (70,000 BTU/hr)/CSA FT4.

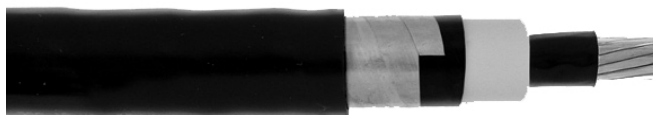
Optional Flame Test: ICEA T-29-520 (210,000 BTU/hr).

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

USAWC Part #	AWG or kcmil	No. of Strands	Thickness in Mils		Nominal Diameter Over Ins. (Inches)	Nominal Diameter (Inches)	Copper Conductor				
			Insulation	Jacket			Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)	Ampacity*		
									Tray	Conduit	Duct
5000 Volts – 133% Insulation Level or 8000 Volts – 100% Insulation Level											
USA4-015KVESP	4	7	115	60	.50	.71	350	178	-	110	120
USA2-015KVESP	2	7	115	60	.56	.77	460	259	-	145	155
USA1-015KVESP	1	19	115	60	.60	.81	565	315	-	175	180
USA1/0-015KVESP	1/0	19	115	60	.64	.84	620	386	290	200	210
USA2/0-015KVESP	2/0	19	115	80	.68	.93	755	474	330	225	235
USA3/0-015KVESP	3/0	19	115	80	.73	.99	890	585	385	270	270
USA4/0-015KVESP	4/0	19	115	80	.79	1.04	1055	725	445	305	310
USA250-015KVESP	250	37	115	80	.85	1.09	1205	849	495	355	345
USA350-015KVESP	350	37	115	80	.95	1.20	1570	1165	615	430	415
USA500-015KVESP	500	37	115	80	1.08	1.34	2115	1639	775	530	505
USA750-015KVESP	750	61	115	80	1.27	1.53	2995	2427	1000	665	630
USA1000-015KVESP	1000	61	115	80	1.42	1.68	3870	3210	1200	770	720

*TRAY: Single layer in uncovered cable tray with one cable diameter spacing, 105°C Conductor Temperature, 40°C Ambient. CONDUIT: Three cables in isolated conduit in air, 105°C Conductor Temperature, 40°C Ambient. DUCT: Three cables per duct, 105°C Conductor Temperature, 20°C Ambient, One Circuit, 100% Load Factor, Rho = 90. For other installation conditions refer to the NEC.

MEDIUM VOLTAGE POWER



- ▶ **1 Conductor**
- ▶ **EPR**
- ▶ **PVC**
- ▶ **Type MV-105**
- ▶ **15kV – 133%**

PRODUCT CONSTRUCTION

Conductor: 2 AWG through 1000 kcmil annealed bare copper compact Class B strand.

Extruded Strand Shield (ESS): Extruded thermoset semi-conducting stress-control layer over conductor.

Insulation: Ethylene Propylene Rubber (EPR) insulation, colored to contrast with the black conducting shield layers.

Extruded Insulation Shield (EIS): Thermoset semi-conducting polymeric layer free stripping from insulation.

Metallic Shield: 5 mil annealed copper tape with an overlap of 25%.

Jacket: Lead-free, flame-retardant moisture- and sunlight-resistant Polyvinyl Chloride (PVC). Also available: (CPE) jacket.

APPLICATIONS

For use in aerial, conduit, open tray and underground duct installations. For use in wet or dry locations when installed in accordance with the NEC. Can be used in wet or dry locations when installed in accordance with the NEC. Can be used in direct burial if installed in a system with a ground conductor that is in close proximity and conforms with NEC 250.4(A)(5). Superior performance in petrochemical plants, pulp and paper mills, sewage and water treatment plants, environmental protection systems, railroads, mines, utility power generating stations, steel mills, textile plants and other industrial three-phase applications.

FEATURES

Rated at 105°C. Excellent heat, flame and moisture resistance. Outstanding corona resistance. High dielectric strength. Low moisture absorption. Electrically stable under stress. Low dielectric loss. Chemical-resistant. Meets cold bend test at -35°C. loss.

COMPLIANCES

Industry: National Electrical Code (NEC). UL 1072. ICEA S-93-639/NEMA WC74. ICEA S-97-682. AEIC CS8. UL listed as type MV-105 for use in accordance with the NEC. Sizes 1/0 AWG and larger are listed and marked "Sunlight-Resistant FOR CT USE" in accordance with NEC.

Flame Test: UL 1685 (Sizes 1/0 AWG and larger) UL Flame Exposure Test. IEEE 1202 (70,000 BTU/hr)/CSA FT4.

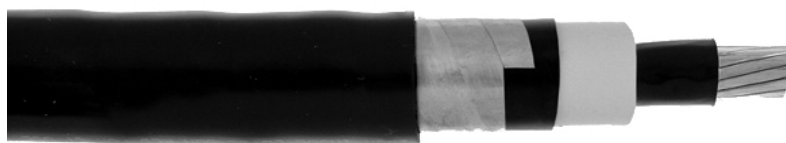
Optional Flame Test: ICEA T-29-520 (210,000 BTU/hr).

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

USAWC Part #	AWG or kcmil	No. of Strands	Thickness in Mils		Nominal Diameter Over Ins. (Inches)	Nominal Diameter (Inches)	Copper Conductor				
			Insulation	Jacket			Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)	Ampacity*		
									Tray	Conduit	Duct
15000 Volts, Shielded, 133% Insulation Level											
USA2-0115KVESPU	2	7	220	80	.77	1.02	685	276	-	165	165
USA1-0115KVESPU	1	19	220	80	.81	1.06	760	332	-	190	185
USA1/0-0115KVESPU	1/0	19	220	80	.85	1.10	840	403	290	215	215
USA2/0-0115KVESPU	2/0	19	220	80	.89	1.14	955	492	335	255	245
USA3/0-0115KVESPU	3/0	19	220	80	.95	1.19	1115	603	385	290	275
USA4/0-0115KVESPU	4/0	19	220	80	1.00	1.25	1275	743	445	330	315
USA250-0115KVESPU	250	37	220	80	1.06	1.33	1465	866	495	365	345
USA350-0115KVESPU	350	37	220	80	1.16	1.43	1840	1184	610	440	415
USA500-0115KVESPU	500	37	220	80	1.29	1.56	2395	1657	765	535	500
USA750-0115KVESPU	750	61	220	110	1.48	1.81	3415	2445	990	655	610
USA1000-0115KVESPU	1000	61	220	110	1.63	1.98	4435	3228	1185	755	690

*TRAY: Single layer in uncovered cable tray with one cable diameter spacing, 105°C Conductor Temperature, 40°C Ambient. CONDUIT: Three cables in isolated conduit in air, 105°C Conductor Temperature, 40°C Ambient. DUCT: Three cables per duct, 105°C Conductor Temperature, 20°C Ambient, One Circuit, 100% Load Factor, Rho = 90. For other installation conditions refer to the NEC.

MEDIUM VOLTAGE POWER



- ▶ **1 Conductor**
- ▶ **EPR**
- ▶ **PVC**
- ▶ **Type MV-105**
- ▶ **35kV – 100%**

PRODUCT CONSTRUCTION

Conductor: 1/0 AWG through 1000 kcmil annealed bare copper compact Class B strand.

Extruded Strand Shield (ESS): Extruded thermoset semi-conducting stress-control layer over conductor.

Insulation: Ethylene Propylene Rubber (EPR) insulation, colored to contrast with the black conducting shield layers.

Extruded Insulation Shield (EIS): Thermoset semi-conducting polymeric layer free stripping from insulation.

Metallic Shield: 5 mil annealed copper tape with an overlap of 25%.

Jacket: Lead-free, flame-retardant moisture- and sunlight-resistant Polyvinyl Chloride (PVC). Also available: (CPE) jacket.

APPLICATIONS

For use in aerial, conduit, open tray and underground duct installations. For use in wet or dry locations when installed in accordance with the NEC. Can be used in wet or dry locations when installed in accordance with the NEC. Can be used in direct burial if installed in a system with a ground conductor that is in close proximity and conforms with NEC 250.4(A)(5). Superior performance in petrochemical plants, pulp and paper mills, sewage and water treatment plants, environmental protection systems, railroads, mines, utility power generating stations, steel mills, textile plants and other industrial three-phase applications.

FEATURES

Rated at 105°C. Excellent heat, flame and moisture resistance. Outstanding corona resistance. High dielectric strength. Low moisture absorption. Electrically stable under stress. Low dielectric loss. Chemical-resistant. Meets cold bend test at -35°C. loss.

COMPLIANCES

Industry: National Electrical Code (NEC). UL 1072. ICEA S-93-639/NEMA WC74. ICEA S-97-682. AEIC CS8. UL listed as type MV-105 for use in accordance with the NEC. Sizes 1/0 AWG and larger are listed and marked "Sunlight-Resistant FOR CT USE" in accordance with NEC.

Flame Test: UL 1685 (Sizes 1/0 AWG and larger) UL Flame Exposure Test. IEEE 1202 (70,000 BTU/hr)/CSA FT4.

Optional Flame Test: ICEA T-29-520 (210,000 BTU/hr).

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

USAWC Part #	AWG or kcmil	No. of Strands	Thickness in Mils		Nominal Diameter Over Ins. (Inches)	Nominal Diameter (Inches)	Copper Conductor				
			Insulation	Jacket			Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)	Ampacity*		
									Tray	Conduit	Duct
35000 Volts, Shielded, 100% Insulation Level											
USA1/0-0135KVESPG	1/0	19	345	80	1.11	1.31	1160	425	290	215	215
USA2/0-0135KVESPG	2/0	19	345	80	1.15	1.35	1290	514	330	255	245
USA3/0-0135KVESPG	3/0	19	345	80	1.20	1.40	1445	625	380	290	275
USA4/0-0135KVESPG	4/0	19	345	80	1.26	1.45	1635	765	445	330	315
USA250-0135KVESPG	250	37	345	80	1.34	1.51	1805	888	490	365	345
USA350-0135KVESPG	350	37	345	80	1.43	1.60	2205	1206	605	440	415
USA500-0135KVESPG	500	37	345	80	1.56	1.72	2920	1679	755	535	500
USA750-0135KVESPG	750	61	345	110	1.75	1.96	3895	2467	970	655	610
USA1000-0135KVESPG	1000	61	345	110	1.90	2.10	4840	3250	1160	755	690

*TRAY: Single layer in uncovered cable tray with one cable diameter spacing, 105°C Conductor Temperature, 40°C Ambient. CONDUIT: Three cables in isolated conduit in air, 105°C Conductor Temperature, 40°C Ambient. DUCT: Three cables per duct, 105°C Conductor Temperature, 20°C Ambient, One Circuit, 100% Load Factor, Rho = 90. For other installation conditions refer to the NEC.

MEDIUM VOLTAGE POWER



- ▶ **3 Conductors**
- ▶ **EPR**
- ▶ **PVC**
- ▶ **Type MV-105**
- ▶ **5kV and 8kV**

PRODUCT CONSTRUCTION

Conductor: 4 AWG through 1000 kcmil annealed bare copper compact Class B strand.

Extruded Strand Shield (ESS): Extruded thermoset semi-conducting stress-control layer over conductor.

Insulation: Ethylene Propylene Rubber (EPR) insulation, colored to contrast with the black conducting shield layers.

Extruded Insulation Shield (EIS): Thermoset semi-conducting polymeric layer free stripping from insulation.

Metallic Shield: 5 mil annealed copper tape with an overlap of 25%.

Jacket: Lead-free, flame-retardant moisture- and sunlight-resistant Polyvinyl Chloride (PVC). Also available: (CPE) jacket.

APPLICATIONS

For use in aerial, conduit, open tray, direct burial and underground duct installations. For use in wet or dry locations when installed in accordance with the NEC. Suitable for commercial, industrial and utility applications where space is limited, ease of installation is critical and reliability is the major concern.

FEATURES

Rated at 105°C. Excellent heat, flame and moisture resistance. Outstanding corona resistance. High dielectric strength. Low moisture absorption. Electrically stable under stress. Low dielectric loss. Chemical-resistant. Meets cold bend test at -35°C.

COMPLIANCES

Industry: National Electrical Code (NEC). UL 1072. ICEA S-93-639/NEMA WC74. ICEA S-97-682. AEIC CS8. UL listed as type MV-105 for use in accordance with the NEC. Sizes 1/0 AWG and larger are listed and marked "Sunlight-Resistant FOR CT USE" in accordance with NEC.

Flame Test: UL 1685 (70,000 BTU/hr)

Optional Flame Test: IEEE 1202 (70,000 BTU/hr)/CSA FT4. ICEA T-29-520 (210,000 BTU/hr.)

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

USAWC Part #	Size (AWG or kcmil)	No. of Strands	Thickness in Mils		Nominal Diameter Over Ins. (Inches)	Nom. Diam. (Inches)	Grounding Conductor Size (AWG)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)	Ampacity*	
			Insulation	Jacket						Conduit	Duct
5000 Volts – 133% Insulation Level or 8000 Volts – 100% Insulation Level											
USA4-035KVESP	4	7	115	80	.50	1.44	6	1245	616	100	115
USA2-035KVESP	2	7	115	80	.56	1.57	6	1575	860	135	154
USA1-035KVESP	1	19	115	80	.60	1.70	4	1950	1074	155	180
USA1/0-035KVESP	1/0	19	115	110	.64	1.80	4	2250	1290	185	205
USA2/0-035KVESP	2/0	19	115	110	.68	1.89	4	2585	1556	210	240
USA3/0-035KVESP	3/0	19	115	110	.73	2.00	3	3040	1918	245	280
USA4/0-035KVESP	4/0	19	115	110	.79	2.13	3	3685	2344	285	320
USA250-035KVESP	250	37	115	110	.85	2.25	3	4160	2759	315	355
USA350-035KVESP	350	37	115	110	.95	2.47	2	5340	3713	390	440
USA500-035KVESP	500	37	115	110	1.08	2.79	1	6610	5191	475	545
USA750-035KVESP	750	61	115	140	1.27	3.26	1/0	10275	7629	585	685
USA1000-035KVESP	1000	61	115	140	1.42	3.59	1/0	12990	10070	660	790

*TRAY: Single layer in uncovered cable tray with one cable diameter spacing, 105°C Conductor Temperature, 40°C Ambient. CONDUIT: Three cables in isolated conduit in air, 105°C Conductor Temperature, 40°C Ambient. DUCT: Three cables per duct, 105°C Conductor Temperature, 20°C Ambient, One Circuit, 100% Load Factor, Rho = 90. For other installation conditions refer to the NEC.

MEDIUM VOLTAGE POWER



- ▶ **3 Conductors**
- ▶ **EPR**
- ▶ **PVC**
- ▶ **Type MV-105**
- ▶ **15kV – 133%**

PRODUCT CONSTRUCTION

Conductor: 2 AWG through 1000 kcmil annealed bare copper compact Class B strand.

Extruded Strand Shield (ESS): Extruded thermoset semi-conducting stress-control layer over conductor.

Insulation: Ethylene Propylene Rubber (EPR) insulation, colored to contrast with the black conducting shield layers.

Extruded Insulation Shield (EIS): Thermoset semi-conducting polymeric layer free stripping from insulation.

Metallic Shield: 5 mil annealed copper tape with an overlap of 25%.

Jacket: Lead-free, flame-retardant moisture- and sunlight-resistant Polyvinyl Chloride (PVC). Also available: (CPE) jacket.

APPLICATIONS

For use in aerial, conduit, open tray, direct burial and underground duct installations. For use in wet or dry locations when installed in accordance with the NEC. Suitable for commercial, industrial and utility applications where space is limited, ease of installation is critical and reliability is the major concern.

FEATURES

Rated at 105°C. Excellent heat, flame and moisture resistance. Outstanding corona resistance. High dielectric strength. Low moisture absorption. Electrically stable under stress. Low dielectric loss. Chemical-resistant. Meets cold bend test at -35°C.

COMPLIANCES

Industry: National Electrical Code (NEC). UL 1072. ICEA S-93-639/NEMA WC74. ICEA S-97-682. AEIC CS8. UL listed as type MV-105 for use in accordance with the NEC. Sizes 1/0 AWG and larger are listed and marked "Sunlight-Resistant FOR CT USE" in accordance with NEC.

Flame Test: UL 1685 (70,000 BTU/hr)

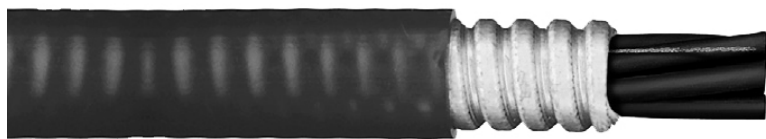
Optional Flame Test: IEEE 1202 (70,000 BTU/hr)/CSA FT4. ICEA T-29-520 (210,000 BTU/hr.)

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

USAWC Part #	Size (AWG or kcmil)	No. of Strands	Thickness in Mils		Nominal Diameter Over Ins. (Inches)	Nom. Diam. (Inches)	Grounding Conductor Size (AWG)	Approx. Net Wt. (lbs./1000 ft.)	Copper Weight (lbs./1000 ft.)	Ampacity*	
			Insulation	Jacket						Conduit	Duct
15000 Volts – 133% Insulation Level											
USA2-0315KVESPU	2	7	220	110	.77	2.09	6	2410	913	165	185
USA1-0315KVESPU	1	19	220	110	.81	2.22	4	2690	1125	185	210
USA1/0-0315KVESPU	1/0	19	220	110	.85	2.26	4	2965	1343	215	240
USA2/0-0315KVESPU	2/0	19	220	110	.90	2.36	4	3330	1609	245	275
USA3/0-0315KVESPU	3/0	19	220	110	.95	2.52	3	3800	1972	280	315
USA4/0-0315KVESPU	4/0	19	220	110	1.00	2.59	3	4375	2398	320	360
USA250-0315KVESPU	250	37	220	110	1.06	2.75	2	5025	2812	350	400
USA350-0315KVESPU	350	37	220	110	1.16	3.04	2	6465	3766	430	490
USA500-0315KVESPU	500	37	220	140	1.29	3.32	1	8340	5244	525	600
USA750-0315KVESPU	750	61	220	140	1.48	3.73	1/0	11510	7682	635	745
USA1000-0315KVESPU	1000	61	220	140	1.61	3.99	2/0	13983	10124	725	860

*CONDUIT: Three-conductor cable in isolated conduit in air, 105°C Conductor Temperature, 40°C Ambient. AIR: Three-conductor cable isolated in air, 105°C Conductor Temperature, 40°C Ambient. For other installation conditions refer to the NEC.

MC INTERLOCKED ARMORED



- ▶ **Multi-Conductor**
- ▶ **FR-XLP**
- ▶ **AIA/PVC**
- ▶ **Type MC**
- ▶ **600 V**

PRODUCT CONSTRUCTION

Conductor: 14, 12 or 10 AWG bare copper. Class B stranding per ASTM B3 and B8.

Insulation: Flame-retardant Cross-linked Polyethylene (XLP). Color-coded per ICEA Method 1, Table E-2 (does not include white or green).

Ground: Annealed bare copper Class B stranding per ASTM B8.

Armor: Aluminum Interlocked Armor (AIA)

Jacket: Flame-retardant, moisture- and sunlight-resistant Polyvinyl Chloride (PVC), black.

APPLICATIONS

In all raceways or direct burial. In wet or dry locations. Permitted for use in Class I, Division 2; and Class III, Division 1 and 2 per NEC Article 334.

FEATURES

Rated at 90°C wet or dry. Sunlight-resistant. Provides excellent oil and chemical resistance. Excellent crush resistance. Flame-retardant and resistant to moisture. Cost-effective alternative to installations in conduit. Meets cold bend test at -25°C.

COMPLIANCES

Industry: UL 1569. UL 44. ICEA S-95-658/NEMA WC70. UL Type MC-600 volts. NEC Type XHHW-2 conductors.

Flame Test: IEEE 383 (70,000 BTU/hr). UL 1581 (70,000 BTU/hr). IEEE 1202 (70,000 BTU/hr) CSA FT4. ICEA T-29-520 (210,000 BTU/hr).

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

14 AWG – 7 Strand

USAWC Part #	No. of Conductors	Ground Wire Size (AWG)	Nominal Diameter Over Armor (Inches)	Overall PVC Jacket (Mils)	Nominal Diameter (Inches)	Weight (lbs./1000 ft.)	
						Net	Copper
USA14-02AIAWGPVC	2	14	.46	50	.56	160	39
USA14-03AIAWGPVC	3	14	.48	50	.58	185	52
USA14-04AIAWGPVC	4	14	.53	50	.64	220	65
USA14-05AIAWGPVC	5	14	.55	50	.66	245	79
USA14-07AIAWGPVC	7	14	.59	50	.70	295	104
USA14-09AIAWGPVC	9	14	.68	50	.78	360	130
USA14-12AIAWGPVC	12	14	.76	50	.87	430	168
USA14-19AIAWGPVC	19	14	.90	50	1.00	590	259
USA14-25AIAWGPVC	25	14	1.03	50	1.14	750	337
USA14-37AIAWGPVC	37	14	1.17	50	1.27	1110	492

12 AWG – 7 Strand

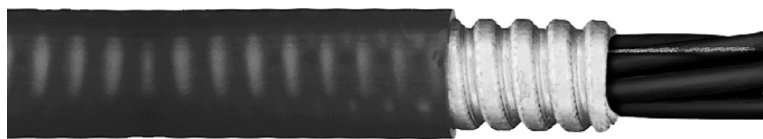
USA12-02AIAWGPVC	2	12	.52	50	.61	205	64
USA12-03AIAWGPVC	3	12	.53	50	.63	230	83
USA12-04AIAWGPVC	4	12	.56	50	.67	275	103
USA12-05AIAWGPVC	5	12	.63	50	.73	315	129
USA12-07AIAWGPVC	7	12	.67	50	.78	375	165
USA12-09AIAWGPVC	9	12	.77	50	.87	460	214
USA12-12AIAWGPVC	12	12	.85	50	.96	570	279
USA12-19AIAWGPVC	19	12	1.00	50	1.10	790	428
USA12-25AIAWGPVC	25	12	1.15	50	1.26	1035	557
USA12-37AIAWGPVC	37	12	1.31	50	1.41	1395	793

10 AWG – 7 Strand

USA10-02AIAWGPVC	2	10	.57	50	.67	260	96
USA10-03AIAWGPVC	3	10	.58	50	.68	300	131
USA10-04AIAWGPVC	4	10	.64	50	.75	355	164
USA10-05AIAWGPVC	5	10	.69	50	.80	410	192
USA10-07AIAWGPVC	7	10	.75	50	.85	500	256
USA10-09AIAWGPVC	9	10	.86	50	.96	620	320
USA10-12AIAWGPVC	12	10	.96	50	1.07	770	416
USA10-19AIAWGPVC	19	10	1.12	50	1.22	1095	640
USA10-25AIAWGPVC	25	10	1.30	50	1.40	1390	832
USA10-37AIAWGPVC	37	10	1.48	50	1.58	1935	1216

NOTES: 1. Standard color is Method 1 for NEC applications per Appendix E, Table E-2, of ICEA S-73-532.
2. Cables may be supplied with galvanized steel interlocked armor on request.

MC INTERLOCKED ARMORED



- ▶ **3 Conductors**
- ▶ **FR-XLP**
- ▶ **AIA/PVC**
- ▶ **Type MC**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 14 AWG through 750 kcmil bare copper. Class B stranding per ASTM B8.

Insulation: Cross-linked Polyethylene (XLP). Color-coded per ICEA Method 3, Table E-2.

Ground: Annealed bare copper Class B stranding per ASTM B8.

Armor: Aluminum Interlocked Armor (AIA)

Jacket: Flame-retardant, moisture- and sunlight-resistant Polyvinyl Chloride (PVC), black.

APPLICATIONS

For installation in exposed or concealed work in wet or dry locations, indoors or outdoors and cable trays. Permitted for use in Class I; Class II, Division 2; and Class III, Division 1 and 2 hazardous locations per the NEC. Ideal for use in commercial, industrial and utility applications that require ease of installation, maximum performance and fire resistance.

FEATURES

Rated at 90°C wet or dry. Provides excellent oil and chemical resistance. Excellent crush resistance. Provides a long service life. Cost-effective alternative to installations in conduit. Meets cold bend test at -25°C.

COMPLIANCES

Industry: UL 1569. UL 44. ICEA S-95-658/NEMA WC70. UL Type MC-600 volts, NEC Type XHHW-2 conductors.

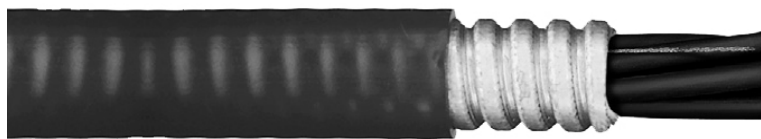
Flame Test: IEEE 383 (70,000 BTU/hr). UL 1581 (70,000 BTU/hr). IEEE 1202 (70,000 BTU/hr) CSA FT4. ICEA T-29-520 (210,000 BTU/hr).

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

USAWC Part #	Size (AWG or kcmil)	No. of Strands	Insul. Thick. (Mils)	Nom. Diam. Over Armor (Inches)	PVC Jkt. Thick. (Mils)	Nom. Diam. Over PVC Jkt. (Inches)	Copper Grounding Conductor (AWG)	Weight (lbs./1000 ft.)			Ampacity [*]	
								Alum. Armor	Steel Armor	Copper	90°C	75°C
USA14-03AIAWGPVC	14	7	30	.48	50	.58	14	185	235	52	25	20
USA12-03AIAWGPVC	12	7	30	.52	50	.63	12	230	265	84	30	25
USA10-03AIAWGPVC	10	7	30	.57	50	.68	10	300	360	128	40	35
USA8-03AIAWGPVC	8	7	45	.70	50	.80	10	410	565	189	55	50
USA6-03AIAWGPVC	6	7	45	.78	50	.88	8	550	735	300	75	65
USA4-03AIAWGPVC	4	7	45	.89	50	.99	8	740	950	447	95	85
USA2-03AIAWGPVC	2	7	45	1.01	50	1.12	6	1075	1315	710	130	115
USA1-03AIAWGPVC	1	19	55	1.16	50	1.27	6	1380	1630	873	150	130
USA1/0-03AIAWGPVC	1/0	19	55	1.23	50	1.34	6	1555	1855	1081	170	150
USA2/0-03AIAWGPVC	2/0	19	55	1.32	50	1.43	6	1850	2195	1341	195	175
USA3/0-03AIAWGPVC	3/0	19	55	1.46	50	1.57	4	2350	2665	1717	225	200
USA4/0-03AIAWGPVC	4/0	19	55	1.56	60	1.68	4	2820	3205	2130	260	230
USA250-03AIAWGPVC	250	37	65	1.74	60	1.86	4	3310	3940	2495	290	255
USA350-03AIAWGPVC	350	37	65	1.96	60	2.10	3	4475	4970	3474	350	310
USA500-03AIAWGPVC	500	37	65	2.24	60	2.37	2	6075	6580	4934	430	380
USA750-03AIAWGPVC	750	61	80	2.68	75	2.84	1	8960	9700	7351	535	475

*AMPACITY in accordance with the NEC for cables installed in uncovered cable tray without maintained spacing at the conductor temperature indicated in wet or dry locations, 30°C ambient temperature.

MC INTERLOCKED ARMORED



- ▶ **4 Conductors**
- ▶ **FR-XLP**
- ▶ **AIA/PVC**
- ▶ **Type MC**
- ▶ **600V**

PRODUCT CONSTRUCTION

Conductor: 14 AWG through 750 kcmil bare copper. Class B stranding per ASTM B8.

Insulation: Cross-linked Polyethylene (XLP). Color-coded per ICEA Method 3, Table E-2.

Ground: Annealed bare copper Class B stranding per ASTM B8.

Armor: Aluminum Interlocked Armor (AIA)

Jacket: Flame-retardant, moisture- and sunlight-resistant Polyvinyl Chloride (PVC), black.

APPLICATIONS

For installation in exposed or concealed work in wet or dry locations, indoors or outdoors and cable trays. Permitted for use in Class I; Class II, Division 2; and Class III, Division 1 and 2 hazardous locations per the NEC. Ideal for use in commercial, industrial and utility applications that require ease of installation, maximum performance and fire resistance.

FEATURES

Rated at 90°C wet or dry. Provides excellent oil and chemical resistance. Excellent crush resistance. Provides a long service life. Cost-effective alternative to installations in conduit. Meets cold bend test at -25°C.

COMPLIANCES

Industry: UL 1569. UL 44. ICEA S-95-658/NEMA WC70. UL Type MC-600 volts, NEC Type XHHW-2 conductors.

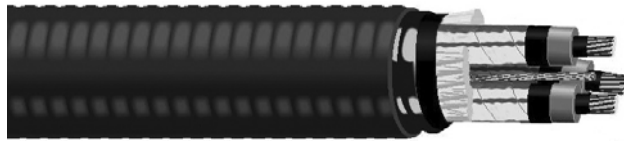
Flame Test: IEEE 383 (70,000 BTU/hr). UL 1581 (70,000 BTU/hr). IEEE 1202 (70,000 BTU/hr) CSA FT4. ICEA T-29-520 (210,000 BTU/hr).

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

USAWC Part #	Size (AWG or kcmil)	No. of Strands	Insul. Thick. (Mils)	Nom. Diam. Over Armor (Inches)	PVC Jkt. Thick. (Mils)	Nom. Diam. Over PVC Jkt. (Inches)	Copper Grounding Conductor (AWG)	Weight (lbs./1000 ft.)			Ampacity [*]	
								Alum. Armor	Steel Armor	Copper	90°C	75°C
USA14-04AIAWGPVC	14	7	30	.51	50	.62	16	230	350	60	20	16
USA12-04AIAWGPVC	12	7	30	.56	50	.67	14	290	420	97	24	20
USA10-04AIAWGPVC	10	7	30	.62	50	.73	12	370	530	148	32	28
USA8-04AIAWGPVC	8	7	45	.76	50	.86	10	505	675	241	44	40
USA6-04AIAWGPVC	6	7	45	.85	50	.95	8	685	870	383	60	52
USA4-04AIAWGPVC	4	7	45	.97	50	1.07	6	925	1150	577	76	68
USA2-04AIAWGPVC	2	7	45	1.10	50	1.22	6	1290	1560	919	104	92
USA1-04AIAWGPVC	1	19	55	1.25	50	1.36	6	1605	1910	1136	120	104
USA1/0-04AIAWGPVC	1/0	19	55	1.35	50	1.46	6	1935	2265	1512	136	120
USA2/0-04AIAWGPVC	2/0	19	55	1.46	50	1.56	6	2355	2720	1760	156	140
USA3/0-04AIAWGPVC	3/0	19	55	1.58	60	1.71	4	2935	3330	2245	180	160
USA4/0-04AIAWGPVC	4/0	19	55	1.75	60	1.88	4	3640	3965	2796	208	184
USA250-04AIAWGPVC	250	37	65	1.92	60	2.04	4	4210	4635	3282	232	204
USA350-04AIAWGPVC	350	37	65	2.16	60	2.30	3	5710	6120	4576	280	248
USA500-04AIAWGPVC	500	37	65	2.47	75	2.63	2	7910	8390	6509	344	304
USA750-04AIAWGPVC	750	61	80	3.03	85	3.22	1	11480	12170	9713	428	380

*AMPACITY in accordance with the NEC for cables installed in uncovered cable tray without maintained spacing at the conductor temperature indicated in wet or dry locations, 30°C ambient temperature.

MC INTERLOCKED ARMORED



- ▶ **3 Conductors**
- ▶ **EPR**
- ▶ **AIA/PVC**
- ▶ **UL MC/MV-105**
- ▶ **5kV – 133%**
- ▶ **8kV – 100%**

PRODUCT CONSTRUCTION

Conductor: 4 AWG through 1000 kcmil bare copper compact, Class B strand.

Extruded Strand Shield (ESS): Thermoset semi-conducting stress-control layer over conductor.

Insulation: Ethylene Propylene Rubber (EPR) insulation, colored to contrast with black conducting layers.

Extruded Insulation Shield (EIS): Thermoset semi-conducting polymeric layer, free stripping from insulation.

Shield: 5 mil annealed copper tape with a minimum 25% overlap.

Ground: Annealed bare copper Class B stranding per ASTM B8.

Armor: Aluminum Interlocked Armor (AIA)

Jacket: Flame-retardant moisture- and sunlight-resistant Polyvinyl Chloride (PVC), yellow.

APPLICATIONS

For use in wet or dry locations, indoors or outdoors, in exposed or concealed work. May be used in cable trays or on approved support in protected areas. Permitted for use in Class I; Class II, Division 2; and Class III, Divisions 1 and 2 hazardous locations per the NEC. Ideal for use in commercial, industrial and utility applications where space is limited and reliability, maximum performance, ease of installation and fire resistance are important.

FEATURES

Rated at 105°C wet or dry. Excellent heat and moisture resistance. Outstanding corona resistance. Flexible for easy handling. High dielectric strength. Low moisture absorption. Electrically stable under stress. Low dielectric loss. Chemical- and radiation-resistant. Excellent crush resistance. Cost-effective alternative to installations in conduit. Meets cold bend test at -25°C.

COMPLIANCES

Industry: UL 1072. ICEA S-93-639/NEMA WC74. AEIC CS8. UL Type MV-105. UL Type MC.

Flame Test: IEEE 383 (70,000 BTU/hr). UL 1581 (70,000 BTU/hr). IEEE 1202 (70,000 BTU/hr) CSA FT4. ICEA T-29-520 (210,000 BTU/hr). ICEA T-30-520 (210,000 BTU/hr).

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

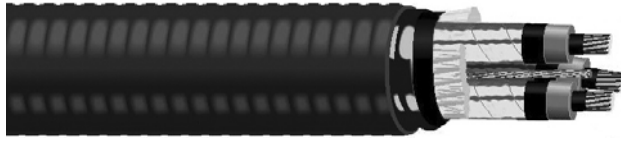
USAWC Part #	Size (AWG or kcmil)	No. of Strands	Insul. Thick. (Mils)	Nom. Diam. Over Armor (Inches)	PVC Jkt. Thick. (Mils)	Nom. Diam. Over PVC Jkt. (Inches)	Copper Phase Conductors					
							Copper Grounding Conductor (AWG)	Weight (lbs./1000 ft.)			Ampacity*	Ampacity**
								Alum. Armor	Steel Armor	Copper		
5000 VOLTS – 133% INSULATION LEVEL or 8000 VOLTS – 100% INSULATION LEVEL												
USA4-035KVESAIA	4	7	115	1.44	50	1.54	6	1360	1745	619	100	115
USA2-035KVESAIA	2	7	115	1.57	60	1.70	6	1775	2160	864	135	154
USA1-035KVESAIA	1	19	115	1.65	60	1.78	4	2055	2475	1074	155	180
USA1/0-035KVESAIA	1/0	19	115	1.78	60	1.91	4	2335	2745	1298	185	205
USA2/0-035KVESAIA	2/0	19	115	1.88	60	2.01	4	2705	3130	1566	210	240
USA3/0-035KVESAIA	3/0	19	115	1.99	60	2.12	3	2920	3375	1918	245	280
USA4/0-035KVESAIA	4/0	19	115	2.11	60	2.24	3	3730	4290	2360	285	320
USA250-035KVESAIA	250	37	115	2.23	60	2.36	3	4200	4770	2735	315	355
USA350-035KVESAIA	350	37	115	2.46	75	2.62	2	5590	6220	3736	390	440
USA500-035KVESAIA	500	37	115	2.77	75	2.93	1	7490	8210	5222	475	545
USA750-035KVESAIA	750	61	115	3.18	85	3.37	1/0	10385	11195	7684	585	685
USA1000-035KVESAIA	1000	61	115	3.50	85	3.69	1/0	13345	14150	10057	660	790

*AMPACITY for cables installed in uncovered cable tray without maintained spacing: 105°C conductor temperature, 40°C ambient.

**AMPACITY for cables installed in uncovered cable tray with maintained spacing of one cable diameter: 105°C conductor temperature, 40°C ambient.

For other installation conditions refer to the NEC.

MC INTERLOCKED ARMORED



- ▶ **3 Conductors**
- ▶ **EPR**
- ▶ **AIA/PVC**
- ▶ **UL MC/MV-105**
- ▶ **15kV – 133%**

PRODUCT CONSTRUCTION

Conductor: 2 AWG through 750 kcmil bare copper compact, Class B strand.

Extruded Strand Shield (ESS): Thermoset semi-conducting stress-control layer over conductor.

Insulation: Ethylene Propylene Rubber (EPR) insulation, colored to contrast with black conducting layers.

Extruded Insulation Shield (EIS): Thermoset semi-conducting polymeric layer, free stripping from insulation.

Shield: 5 mil annealed copper tape with a minimum 25% overlap.

Ground: Annealed bare copper Class B stranding per ASTM B8.

Aarmor: Aluminum Interlocked Armor (AIA)

Jacket: Flame-retardant moisture- and sunlight-resistant Polyvinyl Chloride (PVC), red.

APPLICATIONS

For use in wet or dry locations, indoors or outdoors, in exposed or concealed work. May be used in cable trays or on approved support in protected areas. Permitted for use in Class I; Class II, Division 2; and Class III, Divisions 1 and 2 hazardous locations per the NEC. Ideal for use in commercial, industrial and utility applications where space is limited and reliability, maximum performance, ease of installation and fire resistance are important.

FEATURES

Rated at 105°C wet or dry. Excellent heat and moisture resistance. Outstanding corona resistance. Flexible for easy handling. High dielectric strength. Low moisture absorption. Electrically stable under stress. Low dielectric loss. Chemical- and radiation-resistant. Excellent crush resistance. Cost-effective alternative to installations in conduit. Meets cold bend test at -25°C.

COMPLIANCES

Industry: UL 1072. ICEA S-93-639/NEMA WC74. AEIC CS8. UL Type MV-105. UL Type MC.

Flame Test: IEEE 383 (70,000 BTU/hr). UL 1581 (70,000 BTU/hr). IEEE 1202 (70,000 BTU/hr) CSA FT4. ICEA T-29-520 (210,000 BTU/hr). ICEA T-30-520 (210,000 BTU/hr).

Other: EPA 40 CFR, Part 261, for leachable lead content per TCLP. OSHA acceptable.

USAWC Part #	Size (AWG or kcmil)	No. of Strands	Insul. Thick. (Mils)	Nom. Diam. Over Ins. (Inches)	Nom. Diam. Over Armor (Inches)	PVC Jkt. Thick. (Mils)	Nom. Diam. Over PVC Jkt. (Inches)	Copper Grounding Conductor (AWG)	Weight (lbs./1000 ft.)			Ampacity*	Ampacity**
									Alum. Armor	Steel Armor	Copper		
15000 VOLTS, 133% INSULATION LEVEL													
USA2-0315KVESAIA	2	7	220	.78	2.11	60	2.24	6	2605	3125	919	165	185
USA1-0315KVESAIA	1	19	220	.82	2.20	60	2.33	4	2835	3390	1125	185	210
USA1/0-0315KVESAIA	1/0	19	220	.86	2.28	60	2.41	4	3100	3620	1352	215	240
USA2/0-0315KVESAIA	2/0	19	220	.91	2.39	75	2.55	4	3530	4025	1620	245	275
USA3/0-0315KVESAIA	3/0	19	220	.96	2.50	75	2.66	3	3990	4510	1972	280	315
USA4/0-0315KVESAIA	4/0	19	220	1.02	2.61	75	2.77	3	4615	5200	2114	320	360
USA250-0315KVESAIA	250	37	220	1.07	2.79	75	2.95	3	5315	5895	2789	350	400
USA350-0315KVESAIA	350	37	220	1.18	3.01	75	3.17	2	6600	7225	3790	430	490
USA500-0315KVESAIA	500	37	220	1.30	3.29	85	3.47	1	8710	9350	5276	525	600
USA750-0315KVESAIA	750	61	220	1.49	3.67	85	3.85	1/0	11695	12850	7738	635	745

*AMPACITY for cables installed in uncovered cable tray without maintained spacing: 105°C conductor temperature, 40°C ambient.

**AMPACITY for cables installed in uncovered cable tray with maintained spacing of one cable diameter: 105°C conductor temperature, 40°C ambient.

For other installation conditions refer to the NEC.

MC-HL ARMORED



- **Pair/Triad**
- **PVC**
- **PVC**
- **POS**
- **Type MC-HL**
- **600V**

PRODUCT CONSTRUCTION

Conductor: Bare soft annealed copper, Class B, 7-strand concentric per ASTM B-8.

Insulation: Flame-retardant Okoseal (PVC) per UL 83, 15 mils nominal thickness, 90°C temperature rating.

Jacket: Nylon per UL 83, 4 mils nominal thickness.

Conductor identification: Pigmented black and white in pairs; black, white and red in triads.

Assembly: Pairs or triads assembled with left-hand lay. Non-wicking fillers included where required to provide a round cable.

Cable Shield: Aluminum/Polyester tape overlapped to provide 100% coverage, and a #18 AWG stranded tinned copper drain wire.

Inner Jacket: Black, flame-retardant Lokoseal per UL Standard 1569. A rip cord is laid longitudinally under the jacket to facilitate removal.

Sheath: A close-fitting, impervious, continuously welded and corrugated, aluminum sheath meeting UL 1569.

Outer Jacket: Black, flame-retardant Okoseal per UL Standard 1569.

Classifications: UL Listed as Type MC-HL Articles 501, 502, 503, 504 and 505 of the National Electrical Code.

APPLICATIONS

Single pair or triad type P-OS instrumentation cables are designed for use on Class 1 Remote-Control Signaling circuits or where a 600V cable is desired, as instrumentation, process control or computer cable transmitting signals at levels above 100 millivolts in circuits where shielding against external interference is required, but shielding against interference among groups is not required. For use indoors or outdoors; wet or dry locations; in cable trays; in raceways; supported by a messenger wire; for direct burial; in Classes I, II and III, Divisions 1 and 2 hazardous locations per NEC Articles 501, 502, 503, 504 and 505. Listed by American Bureau of Shipping (ABS) as CWCMC-MC-HL and by UL as Marine Shipboard. Also for use as non-power-limited fire protective signaling cable (NPLF) per NEC Code 760.

FEATURES

UL listed for cable tray use, direct burial and sunlight resistant. Passes the IEEE 383-1974 and IEEE 1202 vertical tray flame tests. Passes the 210,000 BTU Vertical Tray Flame Test utilizing the corner configuration and the ICEA T-29-520 Vertical Tray Flame Test. Permits installation in cable tray containing light and power cables without a barrier separator. Impervious, continuous sheath excludes moisture, gases and liquids. Sheath exceeds equipment grounding conductor requirements of NEC Section 250-95. Excellent compression and impact resistance. Lower installed system cost than conduit or EMT systems. OSHA acceptable. Complies with Articles 501, 502, 503, 504 and 505 for hazardous locations. UL 2309 (CWCMC) listed and UL classified in accordance with IEEE 1580 as Marine Shipboard Cable rated 600/1000 volts. American Bureau of Shipping Type approved as CWCMC Type MC-HL. Recognized by US Coast Guard as Type MC and CWCMC. Suitable for low-temperature installation to -40°C. Meets API Standards 14F and 14FZ.

USAWC Part #	No. of Pairs/Triads	Size Strands	Insulation Thickness Mils (PVC/Nylon)	Jacket Thickness Mils	Nom. Diam. Over Armor (Inches)	Nominal Cable OD Inches	Copper Weight lbs./1000 ft.	Approx. Net Wt. lbs./1000 ft.
OVERALL SHIELD ONLY								
USA16-01POSMCHL	1 Pair	16 7/Str	15/4	50	0.53	.640	18	185
USA16-01TOSMCHL	1 Triad	16 7/Str	15/4	50	0.53	.640	27	190

Notes: Standard color coding is Method E-1 for NEC applications per ICEA: Pairs, black and white; Triads – black, white and red. One conductor in each triad is printed alphanumerically.

MC-HL ARMORED



- **Pairs/Triads**
- **PVC/Nylon**
- **PVC**
- **SPOS/STOS**
- **Type MC-HL**
- **600V**

PRODUCT CONSTRUCTION

Conductor: Bare soft annealed copper, Class B, 7-strand concentric per ASTM B-8.

Insulation: Flame-retardant Okoseal (PVC) per UL 83, 15 mils nominal thickness, 90°C temperature rating.

Jacket: Nylon per UL 83, 4 mils nominal thickness.

Conductor identification: Pigmented black and white in pairs; black, white and red in triads.

Assembly: Pairs or triads assembled with left-hand lay. Non-wicking fillers included where required to provide a round cable.

Cable Shield: Aluminum/Polyester tape overlapped to provide 100% coverage, and a #18 AWG stranded tinned copper drain wire.

Inner Jacket: Black, flame-retardant Lokoseal per UL Standard 1569. A rip cord is laid longitudinally under the jacket to facilitate removal.

Sheath: A close-fitting, impervious, continuously welded and corrugated, aluminum sheath meeting UL 1569.

Outer Jacket: Black, flame-retardant Okoseal per UL Standard 1569.

Classifications: UL Listed as Type MC-HL Articles 501, 502, 503, 504 and 505 of the National Electrical Code.

APPLICATIONS

Single pair or triad type P-OS instrumentation cables are designed for use on Class 1 Remote-Control Signaling circuits or where a 600V cable is desired, as instrumentation, process control or computer cable transmitting signals at levels above 100 millivolts in circuits where shielding against external interference is required, but shielding against interference among groups is not required. For use indoors or outdoors; wet or dry locations; in cable trays; in raceways; supported by a messenger wire; for direct burial; in Classes I, II and III, Divisions 1 and 2 hazardous locations per NEC Articles 501, 502, 503, 504 and 505. Listed by American Bureau of Shipping (ABS) as CWCMC-MC-HL and by UL as Marine Shipboard. Also for use as non-power-limited fire protective signaling cable (NPLF) per NEC Code 760.

FEATURES

UL listed for cable tray use, direct burial and sunlight resistant. Passes the IEEE 383-1974 and IEEE 1202 vertical tray flame tests. Passes the 210,000 BTU Vertical Tray Flame Test utilizing the corner configuration and the ICEA T-29-520 Vertical Tray Flame Test. Permits installation in cable tray containing light and power cables without a barrier separator. Impervious, continuous sheath excludes moisture, gases and liquids. Sheath exceeds equipment grounding conductor requirements of NEC Section 250-95. Excellent compression and impact resistance. Lower installed system cost than conduit or EMT systems. OSHA acceptable. Complies with Articles 501, 502, 503, 504 and 505 for hazardous locations. UL 2309 (CWCMC) listed and UL classified in accordance with IEEE 1580 as Marine Shipboard Cable rated 600/1000 volts. American Bureau of Shipping Type approved as CWCMC Type MC-HL. Recognized by US Coast Guard as Type MC and CWCMC. Suitable for low-temperature installation to -40°C. Meets API Standards 14F and 14FZ.

USAWC Part #	No. of Pairs/Triads	Size Strands	Insulation Thickness (Mils) (PVC/Nylon)	Inner Jacket Thickness (Mils)	Nom. Diam. Over Armor (Inches)	Nominal Cable OD (Inches)	Copper Weight (lbs./1000 ft.)	Approx. Net Wt. (lbs./1000 ft.)
16 AWG – INDIVIDUAL AND OVERALL SHIELD								
USA16-02SPOSMCHL	2 Pairs	16 7/Str	15/4	50	0.67	0.76	42	234
USA16-04SPOSMCHL	4 Pairs	16 7/Str	15/4	50	0.80	0.91	80	335
USA16-06SPOSMCHL	6 Pairs	16 7/Str	15/4	50	0.89	1.00	116	421
USA16-08SPOSMCHL	8 Pairs	16 7/Str	15/4	50	0.93	1.04	155	492
USA16-10SPOSMCHL	10 Pairs	16 7/Str	15/4	50	1.06	1.17	192	601
USA16-12SPOSMCHL	12 Pairs	16 7/Str	15/4	50	1.11	1.22	230	674
USA16-16SPOSMCHL	16 Pairs	16 7/Str	15/4	50	1.29	1.40	306	842
USA16-20SPOSMCHL	20 Pairs	16 7/Str	15/4	50	1.34	1.45	375	977
USA16-24SPOSMCHL	24 Pairs	16 7/Str	15/4	50	1.42	1.53	456	1118
USA16-36SPOSMCHL	36 Pairs	16 7/Str	15/4	50	1.69	1.82	674	1586
USA16-50SPOSMCHL	50 Pairs	16 7/Str	15/4	50	1.92	2.05	935	2124
USA16-04STOSMCHL	4 Triads	16 7/Str	15/4	50	0.84	0.95	108	395
USA16-08STOSMCHL	8 Triads	16 7/Str	15/4	50	1.06	1.17	218	637
USA16-12STOSMCHL	12 Triads	16 7/Str	15/4	50	1.29	1.40	325	863
USA16-16STOSMCHL	16 Triads	16 7/Str	15/4	50	1.37	1.48	433	1058
USA16-24STOSMCHL	24 Triads	16 7/Str	15/4	50	1.64	1.78	649	1485
USA16-36STOSMCHL	36 Triads	16 7/Str	15/4	50	1.96	2.09	972	2141

Notes: Standard color coding is Method E-1 for NEC applications per ICEA: Pairs, black and white; Triads— black, white and red. One conductor in each triad is printed alphanumerically.

MC-HL ARMORED



- ▶ **Multi-Conductor**
- ▶ **FR-XLP**
- ▶ **PVC**
- ▶ **Type MC-HL**
- ▶ **600V**

Type MC-HL for CT use (XHHW-2), 600 V Control Cable, Sun Res. UL and ABS listed as Marine Shipboard Cable Type.

PRODUCT CONSTRUCTION

Conductor: Two or more stranded copper conductors, sizes #8 AWG and larger are compact stranded.

Insulation: XLP-insulated, color-coded conductors.

Color Code: Per ICEA Method 1, Table E-2.

Assembly and Jacket: The individual conductors are cabled together with ground wire(s) and non-hygroscopic fillers and binder tape overall, continuous corrugated aluminum sheath armor with black PVC jacket.

Conductor Temperature: 90°C dry or wet

Sizes: #14 AWG – #10 AWG

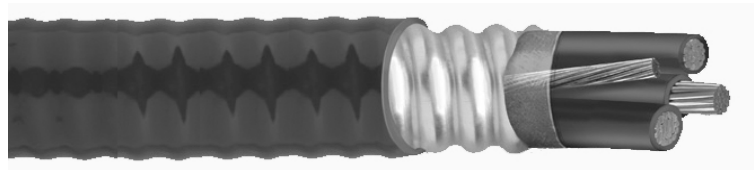
APPLICATION MC-HL

Economical and versatile alternate to a conduit system; for services, feeders and branch circuits in industrial and commercial applications; power, lighting, control and signal circuits; indoors or outdoors, in wet or dry locations, direct burial, in cable tray, in raceways, as open runs of cable, as aerial cable on a messenger and in Class I, Division 2, Class II, Division 2, and Class III hazardous locations. Type MC-HL are listed for use in Class I, Division 1 hazardous locations IEC certified to 60092-350 (1000V).

USAWC Part #	Conductor Size/Strands	No. of Conductors	Grounding Conductor Size	Insulation Thickness (Mils)	C-L-X O.D. (Inches)	Jacket Thickness (Mils)	Approximate O.D. (Inches)	Approximate Net Weight (lbs./1000 ft.)
Type MC-HL Control Cable (Includes grounding conductor(s))								
14 AWG								
USA14-03MCHL	14 (7x)	3	3 x 18 bare	30	0.53	50	0.64	192
USA14-04MCHL	14 (7x)	4	3 x 18 bare	30	0.58	50	0.69	222
USA14-06MCHL	14 (7x)	6	14	30	0.62	50	0.73	267
USA14-08MCHL	14 (7x)	8	14	30	0.71	50	0.82	321
USA14-11MCHL	14 (7x)	11	14	30	0.80	50	0.91	395
USA14-18MCHL	14 (7x)	18	14	30	0.93	50	1.04	554
USA14-36MCHL	14 (7x)	36	14	30	1.24	50	1.35	948
12 AWG								
USA12-03MCHL	12 (7x)	3	3 x 16 bare	30	0.58	50	0.69	239
USA12-04MCHL	12 (7x)	4	3 x 16 bare	30	0.67	50	0.78	310
USA12-06MCHL	12 (7x)	6	12	30	0.67	50	0.78	338
USA12-08MCHL	12 (7x)	8	12	30	0.80	50	0.91	426
USA12-11MCHL	12 (7x)	11	12	30	0.89	50	1.00	519
USA12-18MCHL	12 (7x)	18	12	30	1.02	50	1.13	739
USA12-36MCHL	12 (7x)	36	12	30	1.37	50	1.48	1302
10 AWG								
USA10-03MCHL	10 (7x)	3	3 x 14 bare	30	0.62	50	0.73	303
USA10-04MCHL	10 (7x)	4	3 x 14 bare	30	0.67	50	0.78	348
USA10-06MCHL	10 (7x)	6	10	30	0.75	50	0.86	451
USA10-08MCHL	10 (7x)	8	10	30	0.89	50	1.00	568
USA10-11MCHL	10 (7x)	11	10	30	0.97	50	1.08	704

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MC-HL ARMORED



- ▶ **3C and 4C**
- ▶ **FR-XLP**
- ▶ **PVC**
- ▶ **Type MC-HL**
- ▶ **600V**

Type MC-HL for CT use (XHHW-2), 600 V Control Cable, Sun Res. UL and ABS listed as Marine Shipboard Cable Type.

PRODUCT CONSTRUCTION

Conductor: Two or more stranded copper conductors, sizes #8 AWG and larger are compact stranded.

Insulation: XLP-insulated, color-coded conductors, ground wire (MC-HL only), fillers (as necessary), binder tape over core, corrugated aluminum sheath with PVC jacket overall.

Conductor Temperature: 90°C dry or wet

Sizes: #14 AWG – 750 kcmil

APPLICATION MC-HL

Three symmetrical grounding conductors for PWM/VFD and other modern AC drive/motor applications. Economical and versatile alternate to a conduit system; for services, feeders and branch circuits in industrial and commercial applications; power, lighting, control and signal circuits; indoors or outdoors, in wet or dry locations, direct burial, in cable tray, in raceways, as open runs of cable, as aerial cable on a messenger and in Class I, II and III, Division 1 and 2 hazardous locations. Recommended for VFD/PWM drives. IEC certified to 60092-350 (1000 V).

USAWC Part #	Conductor Size* (AWG or kcmil) and Strands	No. of Conductors	Grounding Conductor** Size	Insulation Thickness (Mils)	Nom. Diam. Over Armor (Inches)	Jacket Thickness (Mils)	Approximate O.D. (Inches)	Approximate Net Weight (lbs./1000 ft.)
USA14-03MCHL	14 (7x)	3	3 x 18	30	0.53	50	0.64	160
USA14-04MCHL	14 (7x)	4	3 x 18	30	0.58	50	0.69	222
USA12-03MCHL	12 (7x)	3	3 x 16	30	0.58	50	0.69	239
USA12-04MCHL	12 (7x)	4	3 x 16	30	0.67	50	0.77	310
USA10-03MCHL	10 (7x)	3	3 x 14	30	0.62	50	0.73	303
USA10-04MCHL	10 (7x)	4	3 x 14	30	0.67	50	0.78	348
USA8-03MCHL	8 (7x)	3	3 x 14	45	0.71	50	0.82	405
USA8-04MCHL	8 (7x)	4	10	45	0.80	50	0.91	480
USA6-03MCHL	6 (7x)	3	3 x 12	45	0.80	50	0.95	500
USA6-04MCHL	6 (7x)	4	8	45	0.89	50	0.99	650
USA4-03MCHL	4 (7x)	3	3 x 12	45	0.89	50	0.99	735
USA4-04MCHL	4 (7x)	4	8	45	0.97	50	1.08	875
USA2-03MCHL	2 (7x)	3	3 x 10	45	1.02	50	1.13	1035
USA2-04MCHL	2 (7x)	4	6	45	1.15	50	1.26	1310
USA1/0-03MCHL	1/0 (19x)	3	3 x 10	55	1.24	50	1.35	1460
USA1/0-04MCHL	1/0 (19x)	4	6	55	1.37	50	1.48	1830
USA2/0-03MCHL	2/0 (19x)	3	3 x 10	55	1.34	50	1.45	1770
USA2/0-04MCHL	2/0 (19x)	4	6	55	1.51	60	1.65	2425
USA4/0-03MCHL	4/0 (19x)	3	3 x 8	55	1.60	60	1.73	2795
USA4/0-04MCHL	4/0 (19x)	4	4	55	1.78	60	1.91	3520
USA250-03MCHL	250 (37x)	3	3 x 8	65	1.74	60	1.87	3325
USA250-04MCHL	250 (37x)	4	4	65	1.96	60	2.09	4070
USA350-03MCHL	350 (37x)	3	3 x 7	65	1.96	60	2.09	4315
USA350-04MCHL	350 (37x)	4	3	65	2.19	60	2.32	5380
USA500-03MCHL	500 (37x)	3	3 x 6	65	2.28	75	2.44	5792
USA500-04MCHL	500 (37x)	4	2	65	2.49	75	2.65	7520
USA750-03MCHL	750 (61x)	3	3 x 5	80	2.75	75	2.92	8575

*#8 and larger is compact round conductor. Conductor Identification: Surface printing of numbers and colors per ICEA Method 3 – sizes #4 AWG and larger; sizes #6 and smaller, Method 1, E-2. **Minimum size. UL permits partitioning of grounding conductor; grounds are bare.

Three Symmetrical Grounding Conductors for PWM and Other Modern AC Drive/Motor Applications

Composite Power & Control Cables									
USAWC Part #	Power Conductors No. x Size	Insulation Thickness (Mils)	Control Conductors No. x Size	Insulation Thickness (Mils)	Nom. Diam. Over Armor (Inches)	Grounding Conductor* No. x Size	Jacket Thickness (Mils)	Approximate O.D. (Inches)	Approximate Net Weight (lbs./1000 ft.)
USA10-3+12-4-03MCHL	3 x 10	30	4 x 12	30	0.75	1 x 10	50	0.86	400
USA8-3+12-4-03MCHL	3 x 8	45	4 x 12	30	0.89	3 x 10	50	1.00	530
USA6-3+12-4-03MCHL	3 x 6	45	4 x 12	30	0.93	1 x 8	50	1.04	685
USA4-3+12-4-03MCHL	3 x 4	45	4 x 12	30	0.97	1 x 8	50	1.08	860

Type MC and MC-HL Conductor Identification: Surface printing of numbers and colors per ICEA Method 3 – sizes #4 AWG and larger; sizes #6 and smaller, Method 1, E-2. *Minimum size. UL permits partitioning of grounding conductor; grounds are bare.

MC-HL ARMORED



- ▶ **3 Conductors**
- ▶ **EPR**
- ▶ **PVC**
- ▶ **MC-HL/MV-105**
- ▶ **5kV – 133%**
- ▶ **8kV – 100%**

PRODUCT CONSTRUCTION

Conductor: 6 AWG through 1000 kcmil bare annealed copper per ASTM B3. Compact stranding per ASTM B496.

Extruded Strand Shield (ESS): Extruded thermoset semi-conductor stress control layer over the conductor per ICEA S-93-639 and UL 1072.

Insulation: 115 mil Ethylene Propylene Rubber (EPR) insulation per ICEA S-93-639 and UL 1072.

Extruded Insulation Shield (EIS): Thermoset semi-conducting polymeric layer, free stripping from the insulation per ICEA S-93-639 and UL 1072.

Shield: 5 mil annealed bare copper tape with 25% overlap.

Grounding Conductor(s): Three split Class B stranded bare annealed copper ground conductors sized in accordance with UL 1072 and NEC Article 250.

Aarmor: Impervious, continuously welded and corrugated aluminum alloy sheath per UL 1072 and 1569. Meets grounding requirements of NEC Article 250.

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

APPLICATIONS

Variable Frequency Drives: 3-conductor CCW armored cables with three symmetrical grounding wires are the preferred wiring method for use with AC motors controlled by pulse-width modulated inverters in VFD applications. For use in Class I, II and III, Divisions 1 and 2; or Class 1, Zones 1 and 2 hazardous locations per NEC Articles 501, 502, 503 and 505. For installation on metal racks, troughs, in raceways and cable trays, or secured to supports not more than six feet apart. For exposed and concealed work in wet or dry locations, directly buried or embedded in concrete. For use on feeders and branch circuits in industrial power distribution systems per NEC Articles 328 and 330.

FEATURES

Armor provides impervious barrier to moisture, gas and liquids. The strand shield, EPR insulation and insulation shield are extruded in one operation. The EPR insulation system has outstanding corona resistance and high dielectric strength, and it provides electrical stability under stress. Meets cold impact test at -40°C.

COMPLIANCES

Industry: UL Type MV-105. UL Type MC-HL, XHHW-2, CT USE, SUN RES, DIR BUR -40°C, FT4. UL Listed Marine Shipboard, American Bureau of Shipping (ABS) Listed for CWCMC.

Design Adherence: ICEA S-93-639/WC74, 5-46 kV Shielded Power Cable. AEIC CS8 Specification for Shielded Power Cable, 5-46 kV.

UL 1072 Medium-Voltage Power Cables. UL 1569 Metal Clad Cables. UL 2225 Cables and Cable Fittings for Use in Hazardous Locations.

UL 1309 Marine Shipboard Cable. CSA C68.3

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 1072.

IEC 60332-3 Category A.

USAWC Part #	Size (AWG or kcmil)	No. of Strands	Insul. Thick. (Mils)	Nom. Diam. Over Armor (Inches)	PVC Jkt. Thick (Mils)	Nom. Diam. Over PVC Jkt. (Inches)	Copper Phase Conductors				
							Copper Grounding Conductor (AWG)	Weight (lbs./1000 ft.)		Ampacity	
								Net	Copper	In Air	Direct Burial
5000 VOLTS – 133% INSULATION LEVEL or 8000 VOLTS – 100% INSULATION LEVEL											
USA6-035KVMCHL	6	7	115	1.37	50	1.48	3 X #10	1121	460	88	115
USA4-035KVMCHL	4	7	115	1.51	60	1.65	3 X #10	1418	616	115	150
USA2-035KVMCHL	2	7	115	1.64	60	1.78	3 X #10	1731	860	154	190
USA1-035KVMCHL	1	19	115	1.69	60	1.82	3 X #8	1978	1074	180	215
USA1/0-035KVMCHL	1/0	19	115	1.78	60	1.91	3 X #8	2259	1290	205	245
USA2/0-035KVMCHL	2/0	19	115	1.92	60	2.05	3 X #8	2626	1556	240	280
USA4/0-035KVMCHL	4/0	19	115	2.15	60	2.28	3 X #7	3650	2344	320	360
USA250-035KVMCHL	250	37	115	2.23	60	2.36	3 X #7	4060	2759	355	395
USA350-035KVMCHL	350	37	115	2.45	75	2.61	3 X #6	5045	3713	440	475
USA500-035KVMCHL	500	37	115	2.75	75	2.92	3 X #5	7137	5191	545	570
USA750-035KVMCHL	750	61	115	3.32	85	3.50	3 X #4	10268	7629	685	700
USA1000-035KVMCHL	1000	61	115	3.76	85	3.94	3 X #4	13051	10070	790	785

MC-HL ARMORED



- ▶ **3 Conductors**
- ▶ **EPR**
- ▶ **PVC**
- ▶ **MC-HL/MV-105**
- ▶ **15kV – 133%**

PRODUCT CONSTRUCTION

Conductor: 2 AWG through 750 kcmil bare annealed copper per ASTM B3. Compact stranding per ASTM B496.

Extruded Strand Shield (ESS): Extruded thermoset semi-conductor stress control layer over the conductor per ICEA S-93-639 and UL 1072.

Insulation: 220 mil Ethylene Propylene Rubber (EPR) insulation per ICEA S-93-639 and UL 1072.

Extruded Insulation Shield (EIS): Thermoset semi-conducting polymeric layer, free stripping from the insulation per ICEA S-93-639 and UL 1072.

Shield: 5 mil annealed bare copper tape with 25% overlap.

Grounding Conductor(s): Class B stranded bare annealed copper ground conductor sized in accordance with UL 1072 and NEC Article 250.

Armor: Impervious, continuously welded and corrugated aluminum alloy sheath per UL 1072 and 1569. Meets grounding requirements of NEC Article 250.

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

APPLICATIONS

For use in Class I, II and III, Divisions 1 and 2; or Class 1, Zones 1 and 2 hazardous locations per NEC Articles 501, 502, 503 and 505. For installation on metal racks, troughs, in raceways and cable trays, or secured to supports not more than six feet apart. For exposed and concealed work in wet or dry locations and in directly buried or embedded in concrete. For use on feeders and branch circuits in industrial power distribution systems per NEC Articles 328 and 330.

FEATURES

Armor provides impervious barrier to moisture, gas and liquids. The strand shield, EPR insulation and insulation shield are extruded in one operation. The EPR insulation system has outstanding corona resistance and high dielectric strength, and it provides electrical stability under stress. Meets cold impact test at -40°C.

COMPLIANCES

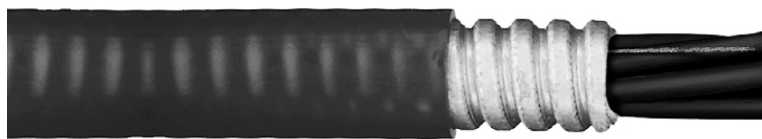
Industry: UL Type MV-105. UL Type MC-HL, XHHW-2, CT USE, SUN RES, DIR BUR -40°C, FT4. UL Listed Marine Shipboard, American Bureau of Shipping (ABS) Listed for CWC MC.

Design Adherence: ICEA S-93-639/WC74, 5-46 kV Shielded Power Cable. AEIC CS8 Specification for Shielded Power Cable, 5-46 kV. UL 1072 Medium-Voltage Power Cables. UL 1569 Metal Clad Cables. UL 2225 Cables and Cable Fittings for Use in Hazardous Locations. UL 1309 Marine Shipboard Cable. CSA C68.3

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 1072. IEC 60332-3 Category A.

USAWC Part #	Size (AWG or kcmil)	No. of Strands	Insul. Thick. (Mils)	Nom. Diam. Over Armor (Inches)	PVC Jkt. Thick (Mils)	Nom. Diam. Over PVC Jkt. (Inches)	Copper Phase Conductors				
							Copper Grounding Conductor (AWG)	Weight (lbs./1000 ft.)		Ampacity	
								Net	Copper	In Air	Direct Burial
15000 VOLTS – 133% INSULATION LEVEL											
USA2-0315KVMCHL	2	7	220	2.15	60	2.28	6	2473	913	185	200
USA1-0315KVMCHL	1	19	220	2.23	60	2.36	4	2811	1125	210	225
USA1/0-0315KVMCHL	1/0	19	220	2.32	75	2.48	4	3190	1343	240	255
USA2/0-0315KVMCHL	2/0	19	220	2.40	75	2.56	4	3630	1609	275	290
USA4/0-0315KVMCHL	4/0	19	220	2.62	75	2.79	3	4435	2398	360	345
USA250-0315KVMCHL	250	37	220	2.75	75	2.92	3	5086	2812	400	410
USA350-0315KVMCHL	350	37	220	3.03	85	3.21	2	6445	3766	490	495
USA500-0315KVMCHL	500	37	220	3.32	85	3.50	1	8376	5244	600	590
USA750-0315KVMCHL	750	61	220	3.80	85	3.98	1/0	11431	7682	745	720

MC CONTINUOUS ARMORED



- **Multi-Conductor**
- **XLP**
- **PVC**
- **Type MC**
- **600V**

Type MC for CT use (XHHW-2), 600 V Control Cable, Sun Res. UL and ABS listed as Marine Shipboard Cable Type

PRODUCT CONSTRUCTION

Conductor: Two or more stranded copper conductors, sizes #8 AWG and larger are compact stranded.

Insulation: XLP-insulated, color-coded conductors.

Color Code: Per ICEA Method 1, Table E-2.

Assembly and Jacket: The individual conductors are cabled together with non-hygroscopic fillers and binder tape overall, continuous corrugated aluminum sheath armor with black PVC jacket overall.

Conductor Temperature: 90°C dry or wet

Sizes: #14 AWG – #10 AWG

APPLICATION MC

Economical and versatile alternate to a conduit system; for services, feeders and branch circuits in industrial and commercial applications; power, lighting, control and signal circuits; indoors or outdoors, in wet or dry locations, direct burial, in cable tray, in raceways, as open runs of cable, as aerial cable on a messenger and in Class I, Division 2; Class II, Division 2; and Class III hazardous locations.

USAWC Part #	Conductor Size/Strands	No. of Conductors	Insulat. Thick. (Mils)	Nom. Diam. Over Armor (Inches)	Jacket Thick. (Mils)	Approximate O.D. (Inches)	Weight (lbs./ 1000 ft.)
Type MC Control Cable (does not include grounding conductor)							
14 AWG							
USA14-03CCS	14 (7x)	3	30	0.49	50	0.60	153
USA14-04CCS	14 (7x)	4	30	0.53	50	0.64	181
USA14-05CCS	14 (7x)	5	30	0.58	50	0.69	210
USA14-07CCS	14 (7x)	7	30	0.62	50	0.73	254
USA14-09CCS	14 (7x)	9	30	0.71	50	0.82	308
USA14-12CCS	14 (7x)	12	30	0.80	50	0.91	381
USA14-19CCS	14 (7x)	19	30	0.93	50	1.04	537
USA14-37CCS	14 (7x)	37	30	1.24	50	1.35	946
12 AWG							
USA12-03CCS	12 (7x)	3	30	0.53	50	0.64	189
USA12-04CCS	12 (7x)	4	30	0.58	50	0.69	226
USA12-05CCS	12 (7x)	5	30	0.62	50	0.73	262
USA12-07CCS	12 (7x)	7	30	0.67	50	0.78	324
USA12-09CCS	12 (7x)	9	30	0.80	50	0.91	405
USA12-12CCS	12 (7x)	12	30	0.89	50	1.00	503
USA12-19CCS	12 (7x)	19	30	1.02	50	1.13	721
USA12-37CCS	12 (7x)	37	30	1.37	50	1.48	1301
10 AWG							
USA10-03CCS	10 (7x)	3	30	0.58	50	0.69	238
USA10-04CCS	10 (7x)	4	30	0.67	50	0.78	297
USA10-07CCS	10 (7x)	7	30	0.75	50	0.86	436

WIRE GAGE TABLE

CONCENTRIC STRANDED CLASS B COPPER AND ALUMINUM CONDUCTORS

Nominal Size Conductor CMIL AWG	lbs/1000 ft.		Number of Wires	Diameter of Wires	Outside Diameter in inches
	Copper	Aluminum			
3,000,000	9353	2843	169	.1332	1.998
2,500,000	7794	2369	127	.1403	1.824
2,000,000	6175	1877	127	.1255	1.632
1,750,000	5403	1642	127	.1174	1.526
1,500,000	4631	1408	91	.1284	1.412
1,250,000	3859	1173	91	.1172	1.289
1,000,000	3088	938.7	61	.1280	1.152
900,000	2779	844.8	61	.1215	1.094
800,000	2470	750.9	61	.1145	1.031
795,000	2466	749.8	61	.1142	1.028
750,000	2316	704.1	61	.1109	.998
700,000	2161	656.9	61	.1071	.964
650,000	2007	610.1	61	.1032	.929
600,000	1853	563.3	61	.0992	.893
550,000	1698	516.2	61	.0950	.855
500,000	1544	469.4	37	.1162	.813
450,000	1389	422.3	37	.1103	.772
400,000	1235	375.5	37	.1040	.728
397,500	1228	373.2	37	.1037	.726
350,000	1081	328.6	37	.0973	.681
300,000	926.3	281.6	37	.0900	.630
250,000	771.9	234.7	37	.0822	.575
0000	653.3	198.6	19	.1055	.528
000	518.1	157.5	19	.0940	.470
00	410.9	124.9	19	.0837	.419
0	325.8	99.04	19	.0745	.373
1	258.4	78.55	19	.0664	.332
2	204.9	62.29	7	.0974	.292
3	162.5	49.40	7	.0867	.260
4	128.9	39.19	7	.0772	.232
5	102.2	31.07	7	.0688	.206
6	81.05	24.64	7	.0612	.184
7	64.28	19.54	7	.0545	.164
8	50.97	15.49	7	.0486	.146
9	40.42	12.29	7	.0432	.130
10	32.06	9.746	7	.0385	.116
12	20.16	6.129	7	.0305	.0915
14	12.68	3.855	7	.0242	.0726
16	7.974	2.424	7	.0192	.0576
18	5.015	1.525	7	.0152	.0456
20	3.154	0.9588	7	.0121	.0363

METRIC CONDUCTORS

Size and Stranding

MM ²	AWG / MCM	Number of Wires	Nominal Overall Dia.		Copper Weight (lbs./1000 ft.)
			Millimeters	Inches	
1		7	1.29	.050	6.09
1.31	16	7	1.47	.058	8.00
1.5		7	1.56	.062	9.14
2.08	14	7	1.85	.073	12.70
2.5		7	2.01	.080	15.23
3.31	12	7	2.34	.092	20.12
4.0		7	2.55	.101	24.37
5.26	10	7	2.95	.116	32.10
6.0		7	3.12	.123	36.56
8.37	8	7	3.71	.146	51.00
10.0		7	4.05	.160	60.93
13.30	6	7	4.67	.184	81.00
16		7	5.13	.202	97.49
21.15	4	7	5.89	.232	129.00
25		7	6.39	.252	152.30
26.67	3	7	6.61	.260	163.00
33.62	2	7	7.42	.292	205.00
35		7	7.56	.298	213.30
35		19	7.65	.302	213.30
42.41	1	19	8.43	.332	259.00
50		19	9.15	.361	304.70
53.49	1/0	19	9.47	.373	326.00
67.43	2/0	19	10.64	.419	411.00
70		19	10.86	.427	426.50
85.01	3/0	19	11.94	.470	518.00
95		19	12.60	.497	578.90
107.2	4/0	19	13.41	.528	653.00
120		19	14.15	.558	731.20

MM ²	AWG / MCM	Number of Wires	Nominal Overall Dia.		Copper Weight (lbs./1000 ft.)
			Millimeters	Inches	
127	250	37	14.61	.575	772
150		19	15.85	.624	914
152	300	37	16.00	.630	926
177	350	37	17.30	.681	1081
185		19	17.60	.693	1127
185		37	17.64	.695	1127
203	400	37	18.49	.728	1235
240		19	20.05	.790	1462
240		37	20.09	.792	1462
253.4	500	37	20.65	.813	1544
280		37	21.70	.855	1706
304	600	61	22.68	.893	1853
310		37	22.89	.902	1889
355		37	24.50	.963	2163
380	750	61	25.35	.998	2316
400		37	25.97	1.023	2437
500		37	29.05	1.143	3047
507	1,000	61	29.26	1.152	3088
625		37	32.48	1.278	3808
625		61	32.49	1.280	3808
633	1,250	91	32.74	1.289	3859
760	1,500	91	35.87	1.412	4632
800		37	36.75	1.446	4875
800		61	36.81	1.448	4875
887	1,750	127	38.76	1.526	5412
1000		37	41.09	1.617	6093
1000		91	41.14	1.620	6093
1010	2000	127	41.45	1.632	6176

APPROXIMATE SHIPPING WEIGHTS (LBS/1000 FT)

Copper Conductors

Size AWG or kcmil	THW	THWN/ TTHN	XHHW	XLP-USE/ RHW/RHH	Size AWG or kcmil
Solid					Solid
14	-	16	-	-	14
12	-	24	-	31	12
10	-	39	-	45	10
Stranded					Stranded
14	-	17	19	-	14
12	-	25	28	33	12
10	-	40	42	47	10
8	77	67	69	76	8
6	112	101	100	108	6
4	167	159	153	160	4
3	206	196	-	-	3
2	254	244	236	244	2
1	333	314	302	319	1
1/0	410	389	376	394	1/0
2/0	506	483	469	488	2/0
3/0	626	601	584	607	3/0
4/0	775	748	731	754	4/0
250	920	884	870	901	250
300	1088	1050	1036	-	300
350	1259	1218	1202	1239	350
400	1427	1384	1367	-	400
500	1761	1713	1697	1738	500
600	2146	2085	2054	-	600
750	2655	2589	2553	2605	750
1000	3503	-	-	-	1000

National Electrical Code

Allowable Ampacities of Insulated Conductors Rated 0-2000 Volts

Ampacities of Not More Than Three Current-Carrying Conductors in Raceway, Cable or Earth. Based on Ambient Temperature of 30°C (86°F)

SIZE AWG OR kcmil	Copper Conductors			Aluminum Conductors			SIZE AWG OR kcmil
	Temperature Rating of Conductor			Temperature Rating of Conductor			
	60°C	75°C	90°C	60°C	75°C	90°C	
	TYPES	TYPES	TYPES	TYPES	TYPES	TYPES	
	TW UF	RHW THW THWN	THHW XHHW USE	RHH RHW-2 XHHW XHHW-2 XHH	THHW THWN-2 THW-2 THHN USE-2	RHH RHW-2 XHHW XHHW-2 XHH	THHW THWN-2 THW-2 THHN USE-2
14**	20	20	25	-	-	-	-
12**	25	25	30	20	20	25	12**
10**	30	35	40	25	30	35	10**
8	40	50	55	30	40	45	8
6	55	65	75	40	50	60	6
4	70	85*	95*	55	65	75	4
3	85	100*	110*	65	75	85	3
2	95	115*	130*	75	90*	100*	2
1	110	130*	150*	85	100*	115*	1
1/0	125	150*	170*	100	120*	135*	1/0
2/0	145	175*	195*	115	135*	150*	2/0
3/0	165	200*	225*	130	155*	175*	3/0
4/0	195	230*	260*	150	180*	205*	4/0
250	215	255*	290*	170	205*	230*	250
300	240	285	320	190	230*	255*	300
350	260	310*	350*	210	250*	280*	350
400	280	335*	380*	225	270	305	400
500	320	380	430	260	310*	350*	500
600	355	420	475	285	340*	385*	600
700	385	460	520	310	375	420	700
750	400	475	535	320	385	435	750
800	410	490	555	330	395	450	800
900	435	520	585	355	425	480	900
1000	455	545	615	375	445	500	1000
1250	495	590	665	405	485	545	1250
1500	520	625	705	435	520	585	1500
1750	545	650	735	455	545	615	1750
2000	560	665	750	470	560	630	2000

National Electrical Code
Allowable Ampacities of Insulated Conductors
Rated 0-2000 Volts

(Notes to Accompany Table)

NOTE 1:

Temp.	Type and Location
	Type TW, wet or dry
	Type UF, wet or dry, or corrosive locations
	Types RHW, THW, THWN, USE, THHW, XHHW, wet or dry
	Types RHH, THHN, XHHW, XHH, dry and damp locations.
	Type THHW, dry locations.
	Types THWN-2, XHHW-2, THW-2, RHW-2, USE-2, wet or dry

NOTE 2:

- Max. size of Type UF is 4/0 AWG.
- Max. size of Types THWN and THHN - 1000 kcmil
- Max. size of Type THHW is 1000 kcmil

NOTE 3:

The allowable values in the Ampacity Table are based on temperature alone and do not take voltage drop into consideration.

Unless specifically permitted in Section 240.4(E) through (G), the overcurrent protection shall not exceed 15 amperes for 14 AWG, 20 amperes for 12 AWG, and 30 amperes for 10 AWG copper; or 15 amperes for 12 AWG and 25 amperes for 10 AWG aluminum after any correction factors. For ambient temperature and number of conductors have been applied.

NOTE 4:

Where the number of current-carrying conductors in a raceway or cable exceeds three, or where single conductors or multi-conductor cables are stacked or bundled longer than 24 inches without maintaining spacing and are not installed in raceways, the allowable ampacity of each conductor shall be reduced as shown in the following table:

Number of Current Carrying Conductors	Percent of Values in Table as Adjusted for Ambient Temp., if Necessary
4 thru 6	80
7 thru 9	70
10 thru 20	50
21 thru 30	45
31 thru 40	40
41 and above*	35

The above derating factors do not apply to conductors in nipples having a length not exceeding 24 inches.

NOTE 5:

For ambient temperatures other than 30°C, multiply the allowable ampacities by the appropriate factor shown below:

Ambient Temperature °C	Conductor Temperature			Ambient Temperature of
	60°C	75°C	90°C	
21 - 25	1.08	1.05	1.04	70 - 77
26 - 30	1.00	1.00	1.00	78 - 86
31 - 35	.91	.94	.96	87 - 95
36 - 40	.82	.88	.91	96 - 104
41 - 45	.71	.82	.87	105 - 113
46 - 50	.58	.75	.82	114 - 122
51 - 55	.41	.67	.76	123 - 131
56 - 60		.58	.71	132 - 140
61 - 70		.33	.58	141 - 158
71 - 80			.41	159 - 176

*For dwelling units, conductors, as listed below, shall be permitted as 120/240 volt, 3 wire, single phase service-entrance conductors, service lateral conductors and feeder conductors that serve as the main power feeder to a dwelling unit and are installed in raceway or cable with or without an equipment grounding conductor. For application of this section, the main power feeder shall be the feeder(s) between the main disconnect and the lighting and appliance branch-circuit panel board(s) and the feeder conductors to a dwelling unit shall not be required to be larger than their service entrance conductors. The grounded conductor shall be permitted to be smaller than the ungrounded conductors provided the requirements of Sections 215.2, 220.22 and 230.42 are met.

RHH, RHW, THHW, THW, THWN, THHN, XHHW, USE, RHW-2, THW-2, THWN-2, XHHW-2, SE, USE-2

Copper AWG or kcmil	Aluminum AWG or kcmil	Service or Feeder Rating (Amperes)
4	2	100
3	1	110
2	1/0	125
1	2/0	150
1/0	3/0	175
2/0	4/0	200
3/0	250	225
4/0	300	250
250	350	300
350	500	350
400	600	400

JACKET AND INSULATION MATERIAL PROPERTIES

Thermoplastic Properties

INSULATION OR JACKET MATERIAL	CHLORINATED POLYETHYLENE (CPE)	POLYVINYL CHLORIDE (PVC)	LOW-DENSITY POLYETHYLENE	POLYETHYLENE CELLULAR	HIGH-DENSITY POLYETHYLENE	POLY-URETHANE	POLY-PROPYLENE	NYLON	TEFLON	TPE
Oxidation Resistance	E	E	E	E	E	E	E	E	O	E
Heat Resistance	G-E	G-E	G	G-E	E	E	G	E	O	G
Oil Resistance	E	E	G-E	G-E	G-E	E	E	E	O	P
Low Temperature Flexibility	G	P-G	G-E	E	E	E	G	G	O	E
Weather, Sun Resistance	E	G-E	E	E	E	E	F-G	E	O	
Ozone Resistance	E	E	E	E	E	E	E	E	E	E
Abrasion Resistance	E	F-G	F-G	G	E	F-G	O	E	G-E	F
Electrical Properties	F	F-G	E	E	E	E	P-F	F	E	G
Flame Resistance	F	E	P	P	P	P	P	P	O	F
Nuclear Radiation Resistance	G-E	P-F	G	G	G	F	G	F-G	P-F	F
Water Resistance	G	E	E	E	E	E	P	P-F	E	E
Acid Resistance	G-E	G-E	G-E	G-E	G-E	E	F	P-F	E	G
Alkali Resistance	G-E	G-E	G-E	G-E	G-E	E	F	E	E	G
Gasoline, Kerosene, Etc. (Aliphatic Hydrocarbons Resistance)	F	G-E	P-F	P-F	P-F	P-F	F	G	E	P
Benzol, Toluol, Etc. (Aromatic Hydrocarbons Resistance)	F	P-F	P	P	P	P-F	P	G	E	P
Degreaser Solvents (Halogenated Hydrocarbons Resistance)	P	P-F	P	P	P	P	P	G	E	P
Alcohol Resistance	G	G-E	E	E	E	E	P	P	E	E

P = Poor
 F = Fair
 G = Good
 E = Excellent
 O = Outstanding

JACKET AND INSULATION MATERIAL PROPERTIES

Thermoset Properties

INSULATION OR JACKET MATERIAL	STYRENE BUTADIENE RUBBER (SBR)	NATURAL RUBBER	SYNTHETIC RUBBER	POLY-BUTADIENE	NEOPRENE	HYPALON® CHLORO-SULFONATED POLYETHYLENE (CSPE)	NITRILE OR RUBBER BUTADINE NITRILE (NBR)	NITRILE/ POLY-CHLORIDE (NBR/PVC)	ETHYLENE PROPYLENE RUBBER (EPR)	CROSS-LINKED POLYETHYLENE (XLPE)	CHLORINATED POLYETHYLENE (CPE)	SILICONE RUBBER
Oxidation Resistance	F	F	G	G	G	E	F	E	G	E	E	E
Heat Resistance	F-G	F	F	F	G	E	G	G	E	G	E	G
Oil Resistance	P	P	P	P	G	G	G-E	G	F	G	G-E	F-G
Low Temperature Flexibility	F-G	G	E	E	F-G	F	F	F	G-E	O	F	O
Weather, Sun Resistance	F	F	F	F	G	E	F-G	G	E	G	E	O
Ozone Resistance	P	P	P	P	G	E	P	G	E	E	G-E	O
Abrasion Resistance	G-E	E	E	E	G-E	G	G-E	E	G	F-G	G-E	F
Electrical Properties	E	E	E	E	F	G	P	F	E	E	F-G	O
Flame Resistance	P	P	P	P	G	G	P	G	P	F-G	G	F-G
Nuclear Radiation Resistance	F-G	F-G	F-G	P	F-G	G	F-G	P	G	E	G	E
Water Resistance	G-E	G-E	E	E	G	G-E	G-E	E	G-E	G-E	G-E	G-E
Acid Resistance	F-G	F-G	F-G	F-G	G	E	G	G	G-E	G-E	E	F-G
Alkali Resistance	F-G	F-G	F-G	F-G	G	E	F-G	G	G-E	G-E	E	F-G
Gasoline, Kerosene, Etc. (Aliphatic Hydrocarbons Resistance)	P	P	P	P	G	F	E	G-E	P	F	F	P-F
Benzol, Toluol, Etc. (Aromatic Hydrocarbons Resistance)	P	P	P	P	P-F	F	G	G	F	F	F	P
Degreaser Solvents (Halogenated Hydrocarbons Resistance)	P	P	P	P	P	P-F	P	G	P	F	P	P-G
Alcohol Resistance	F	G	G	F-G	F	G	E	G	P	E	G-E	G

P = Poor
 F = Fair
 G = Good
 E = Excellent
 O = Outstanding

XLP CROSSLINKED POLYETHYLENE INSULATIONS (LOW VOLTAGE)

Physical and Electrical Specification Data

Test Requirements	0-2000 Volts		0-2000 Volts FR-XLP	
	Guaranteed Value	Typical Value	Guaranteed Value	Typical Value
PHYSICAL PROPERTIES				
Original Tensile Strength, psi	1800 min.	2300	1800 min.	2100
Original Elongation, percent	250 min.	425	250 min.	400
Aged - Air Oven - 168 Hr. @ 121°C				
Percent of Original				
Tensile	75 min.	100	75 min.	95
Elongation	75 min.	95	75 min.	85
Hot Creep, 150°C				
Elongation, %	100 max.	40	100 max.	15
Set, %	5 max.	0	5 max.	0
ELECTRICAL PROPERTIES				
Insulation Resistance Constant (K)	10,000 min.	75,000	10,000 min.	50,000
SIC at 75°C	6.0 max.	3.1	6.0 max.	3.45
Accelerated Water Absorption				
% Change in SIC, 75°C Water				
1 - 14 days	3.0 max.	1.6	3.0 max.	2.6
7 - 14 days	1.5 max.	0.6	1.5 max.	0.9
Stability Factor after 14 Days	1.0 max.	0.1	1.0 max.	0.3
COLD BEND				
1 Hr. @ 3 X O.D.	-30°C	< - 40°C	- 30°C	< - 40°C
FLAME RESISTANCE	UL Horizontal, Passes		UL VW-1 Vertical, Passes	
Complies with: ICEA S-95-658 / NEMA WC70	Class X-2		Class X-2	

EPR INSULATIONS

Physical and Electrical Specification Data

Test Requirements	0-5000 Volts		0-35,000 Volts	
	Guaranteed Value	Typical Value	Guaranteed Value	Typical Value
PHYSICAL PROPERTIES				
Original Tensile Strength, psi	700 min.	1000	1200 min.	1800
Original Elongation, percent	250 min.	400	250 min.	370
Tensile Stress @ 100% Elong., psi	N/A	N/A	500 min.	750
Aged - Air Oven - 168 Hr. @ 121°c				
Percent of Original				
Tensile	75 min.	95	80 min.	95
Elongation	75 min,	90	80 min,	95
Hot Creep, 150°C				
Elongation, %	50 max.	10	50 max.	10
Set, %	5 max.	0	5 max.	0
ELECTRICAL PROPERTIES				
Insulation Resistance Constant (K)	20,000 min.	>100,000	20,000 min.	> 100,000
SIC at R.T.	4.0 max.	2.8	4.0 max.	2.7
D.F. at R.T., %	2.0 max.	1.0	1.5 max.	< 0.5
Accelerated Water Absorption				
SIC, 75°C Water	4.0 max.	2.8	4.0 max.	2.7
% Change in SIC, 75°C Water				
1 - 14 days	3.5 max.	< 0.5	3.5 max.	< 0.5
7 - 14 days	1.5 max.	< 0.5	1.5 max,	< 0.5
Stability Factor after 14 Days	1.0 max.	.10	1.0 max.	.10
COLD BEND				
1 Hr. @ 3 X O.D.	- 35°C	< - 40°C	- 35°C	< - 40°C
Complies with:				
ICEA S-95-658 / NEMA WC 70	Class E-1		Class E-1 and E-2	
ICEA S-96-659 / NEMA WC 71	Class E-1		Class E-1 and E-2	
ICEA S-93-639 / NEMA WC 74	Class I		Class I and II	
ICEAS-97-682	Class I		Class I and II	
ICEA S-94-649	Class I		Class I and II	
ICEA S-75-381 / NEMA WC 58	Type I		Type I and II	

FLAME-RETARDANT PVC JACKET

Specification Data

Test Requirements	Guaranteed	Typical
PHYSICAL PROPERTIES		
Original Tensile Strength, psi	1500 min.	2400
Original Elongation, percent	100 min.	300
Aged - Air Oven - 120 Hr. @ 100°C		
Percent of Original		
Tensile	85 min.	90
Elongation	60 min.	85
Oil Immersion - 4 Hr. @ 70°C		
IRM 902 Oil		
Percent of Original		
Tensile	80 min.	90
Elongation	60 min.	90
Heat Distortion @ 121°C		
Percent	50 max.	20
Heat Shock @ 121 °C	No Cracks	No Cracks
Cold Bend		
1 Hr. @ 8 X O.D.	- 35°C	< - 40°C
WEATHEROMETER		
720 Hour		
Percent of Original		
Tensile	80 min.	95
Elongation	80 min.	95
OXYGEN INDEX	28 min.	29
Complies with:		
ICEA S-95-658 / NEMA WC 70	Table 4-1	
ICEA S-96-659 / NEMA WC 71	Table 5-1	
ICEA S-93-639 / NEMA WC 74	Table 7-1	
ICEA S-97-682	Table 7-6	
ICEA S-94-649	Table 7-6	
ICEA S-73-532 / NEMA WC 57	Table 4-2	
ICEA S-75-381 / NEMA WC 58	Table 4-7	

Information on this sheet subject to change without notice

CPE JACKET

Chlorinated Polyethylene Specification Data

Test Requirements	Guaranteed	Typical
PHYSICAL PROPERTIES Original Tensile Strength, psi Original Elongation, percent Tensile Stress @ 100% Elong., psi Aged - Air Oven - 168 Hr. @ 121°C Percent of Original Tensile Elongation Oil Immersion - 18 Hr. @ 100°C IRM 902 Oil Percent of Original Tensile Elongation	1400 min. 150 min. 1000 min. 85 min. 50 min. 60 min. 60 min.	1575 270 1350 95 65 75 85
ENVIRONMENTAL PROPERTIES Heat Distortion @ 121°C, percent Heat Shock @ 121°C Cold Bend 1 Hr. @ - 35°C, 8 X O.D. 7-Day Mechanical Moisture @ 70°C, mg/in ²	25 max. No Cracks No Cracks 25 max.	4 No Cracks No Cracks 15
ELECTRICAL PROPERTIES Specific Surface Resistivity, megohms	2 X 10 ⁵ min.	5 X 10 ⁶
FLAME & CORROSIVITY PROPERTIES Oxygen Index VW-1 Flame Test Halogen Content (by weight), percent	28 min. Pass 19 max.	30 Pass 18
Complies with: ICEA S-95-658 / NEMA WC 70 ICEA S-93-639 / NEMA WC 74 ICEA S-97-682 ICEA S-94-649 ICEA S-73-532 / NEMA WC 57	Table 4-1 CPE TP Table 7-1 CPE TP Table 7-7 Table 7-7 Table 4-2 CPE TP	

BENDING RADII AND PULLING TENSIONS

MINIMUM BENDING RADII

Power Cables 600 Volts. without Sheath. Shielding or Armor

The minimum bending radii for single and multi-conductor cables rated 600 volts and less, and without lead sheath, shielding or armor;

Thickness of Conductor Insulation in Mils	Minimum Bending Radius as a Multiple of Cable Diameter		
	Overall Diameter of Cable in Inches		
	1.000 and Less	1.001 to 2.000	2.001 and Over
169 and less	4	5	6
170 - 310	5	6	7
311 and over	-	7	8

Power Cables Over 600 Volts. without Sheath. Shielding or Armor

1. The minimum bending radius for all cables is eight times the overall cable diameter.

Shielded Cables without Armor. All Voltages

1. The minimum bending radius for single conductor cable and multi-conductor cable with an overall shield is twelve times the overall cable diameter.
2. The minimum bending radius for multi-conductor or multiplexed cables having individually shielded conductors is twelve times the diameter of one of the individual conductors or seven times the overall diameter, whichever is greater.
3. The minimum bending radius for lead sheathed cables is twelve times the overall cable diameter.

Interlocked Armored Cable. All Voltages

1. The minimum bending radius for cables with non-shielded conductors is seven times the armor O.D..
2. The minimum bending radius for cables with shielded conductors is twelve times the diameter of one phase conductor or seven times the overall diameter, whichever is greater.

Note: The minimum bending radius applies to the inner surface of the cable and not to the cable axis.

PULLING TENSIONS

A. Maximum Pulling Tension on Cable

- (1) With pulling eye attached to copper conductors, the maximum pulling tension in pounds should not exceed 0.008 times cir-mil area.
- (2) With pulling eye attached to aluminum conductors, the maximum pulling tension in pounds should not exceed 0.006 times cir-mil area.

$$T_M = 0.008 \times n \times CM$$

where

T_M = max. tension, lb.

n = number of conductors

CM = cir-mil area of each copper conductor

- (3) With cable grip over lead sheath, the maximum pulling tension in pounds should not exceed 1500 lb./sq. inch of lead sheath cross-sectional area for commercial lead

$$T_M = 4712 \ t \ (0 - t)$$

where

t = sheath thickness, inches

O = overall diameter of cable, inches

- (4) With cable grip over non-leaded cable, the maximum pulling tension should not exceed 1000 lb. and may not exceed the maximum tension based on 0.008 or 0.006 x total conductor area.
- (5) When more than three conductors are pulled together, the maximum pulling tension should be reduced 20%.

B. Maximum Permissible Pulling Length

$$L_M = \frac{T_M}{fW}$$

where

L_M = pulling length, feet (straight section)

T_M = maximum tension, lb.

W = weight of cable per foot, lb.

f = coefficient of friction (usually 0.5)

C. Pulling Tension Requirements in Ducts or Conduits:

- (1) For straight sections, the pulling tension in pounds equals the length of duct or conduit multiplied by the weight per foot of cable and the coefficient of friction (paragraph B, above). $T = LWf$
- (2) For curved sections, the following formula applies:

$$T_c = T_1 e^{fa}$$

where

T_c = tension exiting curved section, lb.

T_1 = tension entering curved section, lb.

a = angle of bend in radians (1 radian = 57.3 deg.)

f = coefficient of friction (usually 0.5)

e = naperian logarithm base

- (3) To limit the sidewall bearing pressure on cables at bends, the maximum pulling tension in pounds shall not exceed the following factor times the radius of curvature of bend expressed in feet:

Cable Type	Factor
Low Voltage 16-10 AWG	300
Low Voltage 8 AWG & LGR	500
5kV NonShielded	500
5kV-35kV	500
Interlocked Armor (all voltages)	300

COMMON COLOR SEQUENCE

Table E1 Color Sequence

COND. NO.	BACKGROUND OR BASE COLOR	FIRST TRACER COLOR	SECOND TRACER COLOR	COND. NO.	BACKGROUND OR BASE COLOR	FIRST TRACER COLOR	SECOND TRACER COLOR
1	Black	-	-	20	Red	Green	-
2	White	-	-	21	Orange	Green	-
3	Red	-	-	22	Black	White	Red
4	Green	-	-	23	White	Black	Red
5	Orange	-	-	24	Red	Black	White
6	Blue	-	-	25	Green	Black	White
7	White	Black	-	26	Orange	Black	White
8	Red	Black	-	27	Blue	Black	White
9	Green	Black	-	28	Black	Red	Green
10	Orange	Black	-	29	White	Red	Green
11	Blue	Black	-	30	Red	Black	Green
12	Black	White	-	31	Green	Black	Orange
13	Red	White	-	32	Orange	Black	Green
14	Green	White	-	33	Blue	White	Orange
15	Blue	White	-	34	Black	White	Orange
16	Black	Red	-	35	White	Red	Orange
17	White	Red	-	36	Orange	White	Blue
18	Orange	Red	-	37	White	Red	Blue
19	Blue	Red	-				

Pair cables are black, white and numbered. Triad cables are black, white, red and numbered

Table E2 Color Sequence

COND. NO.	BACKGROUND OR BASE COLOR	TRACER COLOR	COND. NO.	BACKGROUND OR BASE COLOR	TRACER COLOR
1	Black	-	19	Orange	Blue
2	Red	-	20	Yellow	Blue
3	Blue	-	21	Brown	Blue
4	Orange	-	22	Black	Orange
5	Yellow	-	23	Red	Orange
6	Brown	-	24	Blue	Orange
7	Red	Black	25	Yellow	Orange
8	Blue	Black	26	Brown	Orange
9	Orange	Black	27	Black	Yellow
10	Yellow	Black	28	Red	Yellow
11	Brown	Black	29	Blue	Yellow
12	Black	Red	30	Orange	Yellow
13	Blue	Red	31	Brown	Yellow
14	Orange	Red	32	Black	Brown
15	Yellow	Red	33	Red	Brown
16	Brown	Red	34	Blue	Brown
17	Black	Blue	35	Orange	Brown
18	Red	Blue	36	Yellow	Brown

Pair cables are black, red and numbered. Triad cables are black, red, blue and numbered.
Colors repeat after 36 conductors. There are no green or white conductors or stripes

ANSI MC 96.1 Conductor Alloy and Color Code

COND. TYPE	POSITIVE WIRE		NEGATIVE WIRE		OUTER JACKET
	ALLOY	COLOR	ALLOY	COLOR	
EX	Chromel	Purple	Constantan	Red	Purple
JX	Iron	White	Constantan	Red	Black
KX	Chromel	Yellow	Alumel	Red	Yellow
TX	Copper	Blue	Constantan	Red	Blue

Method 4 All Conductors Black

CONDUCTOR	CONDUCTOR PRINTING
1st	"1-One"
2nd	"2-Two"
3rd	"3-Three"
4th	"4-Four"
5th	"5-Five"