

# Covered Conductor MV Tree Wire

5 kV - 35 kV

**CME**<sup>®</sup>  
wire and cable

A Viakable Company

## Features

Outer layer is sun resistant and withstands UV degradation.

Cross-linked or thermosetting covering system is designed to have a normal operation temperature up to 90 Deg C.

High Density outer covering resists abrasion when in contact with tree or other vegetation.

Outer XL-HDPE covering meets the track resistance qualification per ASTM D2303 with min test voltage of 2.5 kV and min time to track of 1000 minutes.

The outer track-resistant conductor covering prevents direct shorts and instantaneous flashovers due to conductor contact with tree limbs and other objects. This feature results in fewer power outages and reduces the need for frequent tree trimming.

Cable outer covering is offered in both gray and black colors.

## Application

For distribution overhead power lines where space for right-of-way is limited or in close proximity to trees and other vegetation, installed in similar manner as bare conductors without any conductor voltage rating and require the use of compatible insulators and supported on crossarms or brackets.

## Standards

ICEA S-121-733

Tree Wire and Messenger Supported Spacer Cable

## Specifications

Maximum operating voltage:

- 5 kV to 35 kV

Maximum conductor operation temperatures:

THERMOSETTING SYSTEM

- Normal: 90 °C
- Emergency: 130 °C
- Short Circuit: 250 °C

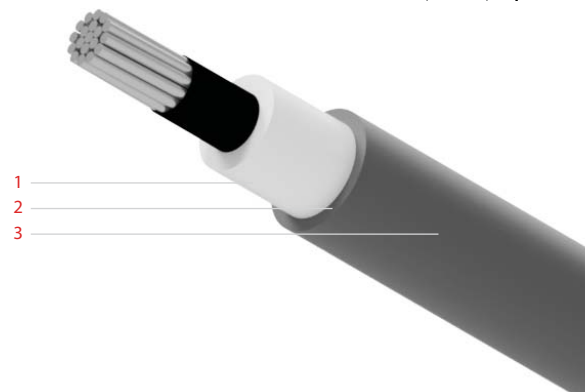
## Engineering Information

**1. Conductor:** Aluminum alloy 1350-H19 compacted per ASTM B400 or ACSR stranded per ASTM B232 or AAAC stranded per ASTM B399.

**2. Conductor Shield:** Semiconducting cross-linked polyethylene (XLPE).

**3. Inner Layer:** Natural low density cross-linked polyethylene (XL-LDPE).

**4. Outer Layer:** Gray or black sun resistant and track-resistant cross-linked high density polyethylene (XL-HDPE).



GRAY JACKET



BLACK JACKET

Technical Data

## AAC Conductor 15 kV System

Size AWG	Number of Strands	Conductor Diameter	Conductor Shield Thickness	Inner Layer Thickness	Outer Layer Thickness	Approximate Outside Diameter	Approximate Net Weight	Rated Strength
		in	mils	mils	mils	in	lb/kft	lbs
1/0	7	0.336	15	75	75	694	222	1791
2/0	7	0.376	15	75	75	734	258	2259
3/0	7	0.423	15	75	75	781	303	2736
4/0	7	0.475	15	75	75	833	359	3447
266.8	19	0.537	15	75	75	905	429	4473
336.4	19	0.603	15	75	75	971	513	5535
397.5	19	0.659	15	75	75	1027	586	6399
477	19	0.722	15	75	75	1090	679	7524
556.5	37	0.780	20	75	75	1148	759	8946
636	37	0.835	20	75	75	1213	857	10260
795	37	0.932	20	80	80	1330	1049	12510

## ACSR Conductor 15 kV System

Size AWG	Number of Strands	Conductor Diameter	Conductor Shield Thickness	Inner Layer Thickness	Outer Layer Thickness	Approximate Outside Diameter	Approximate Net Weight	Rated Strength
		in	mils	mils	mils	in	lb/kft	lbs
4	6/1	0.250	15	75	75	608	157	1767
2	6/1	0.316	15	75	75	674	208	2708
1/0	6/1	0.398	15	75	75	756	284	4161
2/0	6/1	0.447	15	75	75	805	335	5035
3/0	6/1	0.502	15	75	75	860	399	6289
4/0	6/1	0.563	15	75	75	921	476	7933
266.8	18/1	0.609	15	75	75	977	488	6536
266.8	26/7	0.642	15	75	75	1010	575	10735
336.4	18/1	0.684	15	75	75	1052	585	8246
336.4	26/7	0.720	15	75	75	1088	693	13395
397.5	18/1	0.743	15	75	75	1111	668	9443
397.5	24/7	0.772	15	75	75	1140	757	13870
397.5	26/7	0.783	15	75	75	1151	795	15485
477	24/7	0.846	15	75	75	1214	882	16340
477	26/7	0.858	15	75	75	1226	927	18525
477	30/7	0.883	15	75	75	1251	1025	22610
556.5	18/1	0.879	20	75	75	1247	881	13015
556.5	24/7	0.914	20	75	75	1282	1004	18810
556.5	26/7	0.927	20	75	75	1295	1057	21470
636	18/1	0.940	20	75	75	1318	995	14915
636	26/7	0.990	20	75	75	1368	1196	23940

## AAAC Conductor 15 kV System

Size AWG/Kcmil	Number of Strands	Conductor Diameter	Bare AAAC Codename	ACSR equivalent diameter	Conductor Shield Thickness	Inner Layer Thickness	Outer Layer Thickness	Approximate Outside Diameter	Approximate Net Weight	Rated Strength
		in		AWG/Kcmil	mils	mils	mils	in	lb/kft	lbs
48.69	7	0.25	ALTON	4	15	75	75	608	146	1584
77.47	7	0.316	AMES	2	15	75	75	674	190	2520
123.3	7	0.398	AZUSA	1/0	15	75	75	756	254	3843
155.4	7	0.447	ANAHEIM	2/0	15	75	75	805	298	4851
195.7	7	0.502	AMHERST	3/0	15	75	75	860	351	6111
246.9	7	0.563	ALLIANCE	4/0	15	75	75	931	423	7704
312.8	19	0.642	BUTTE	266.8	15	75	75	1010	500	9450
394.5	19	0.72	CANTON	336.4	15	75	75	1088	599	11970
465.4	19	0.783	CAIRO	397.5	15	75	75	1151	683	14040
559.5	19	0.858	DARIEN	477	20	75	75	1226	793	16920
652.4	19	0.927	ELGIN	556.5	20	75	75	1305	910	19710
740.8	37	0.99	FLINT	636	20	75	75	1368	994	21960

The above data are approximate and subject to normal manufacturing tolerances.

Technical Data

### AAC Conductor 25 kV System

Size AWG	Number of Strands	Conductor Diameter	Conductor Shield Thickness	Inner Layer Thickness	Outer Layer Thickness	Approximate Outside Diameter	Approximate Net Weight	Rated Strength
		in	mils	mils	mils	in	lb/kft	lbs
1/0	7	0.336	15	125	125	908	327	1791
2/0	7	0.376	15	125	125	948	369	2259
3/0	7	0.423	15	125	125	995	420	2736
4/0	7	0.475	15	125	125	1047	483	3447
266.8	19	0.537	15	125	125	1119	563	4473
336.4	19	0.603	15	125	125	1185	655	5535
397.5	19	0.659	15	125	125	1241	736	6399
477	19	0.722	15	125	125	1304	837	7524
556.5	37	0.780	20	125	125	1362	925	8946
636	37	0.835	20	125	125	1427	1031	10260
795	37	0.932	20	125	125	1524	1220	12510

### ACSR Conductor 25 kV System

Size AWG	Number of Strands	Conductor Diameter	Conductor Shield Thickness	Inner Layer Thickness	Outer Layer Thickness	Approximate Outside Diameter	Approximate Net Weight	Rated Strength
		in	mils	mils	mils	in	lb/kft	lbs
1/0	6/1	0.398	15	125	125	970	398	4161
2/0	6/1	0.447	15	125	125	1019	456	5035
3/0	6/1	0.502	15	125	125	1074	526	6289
4/0	6/1	0.563	15	125	125	1135	612	7933
266.8	18/1	0.609	15	125	125	1191	631	6536
266.8	26/7	0.642	15	125	125	1224	722	10735
336.4	18/1	0.684	15	125	125	1266	738	8246
336.4	26/7	0.720	15	125	125	1302	851	13395
397.5	18/1	0.743	15	125	125	1325	829	9443
397.5	24/7	0.772	15	125	125	1354	922	13870
397.5	26/7	0.783	15	125	125	1365	961	15485
477	24/7	0.846	15	125	125	1428	1056	16340
477	26/7	0.858	15	125	125	1440	1103	18525
477	30/7	0.883	15	125	125	1465	1204	22610
556.5	18/1	0.879	20	125	125	1461	1060	13015
556.5	24/7	0.914	20	125	125	1496	1188	18810
556.5	26/7	0.927	20	125	125	1509	1243	21470

### AAAC Conductor 25 kV System

Size AWG/Kcmil	Number of Strands	Conductor Diameter	Bare AAAC Codename	ACSR equivalent diameter	Conductor Shield Thickness	Inner Layer Thickness	Outer Layer Thickness	Approximate Outside Diameter	Approximate Net Weight	Rated Strength
		in		AWG/Kcmil	mils	mils	mils	in	lb/kft	lbs
77.47	7	0.316	AMES	2	15	125	125	888	293	2520
123.3	7	0.398	AZUSA	1/0	15	125	125	970	368	3843
155.4	7	0.447	ANAHEIM	2/0	15	125	125	1019	418	4851
195.7	7	0.502	AMHERST	3/0	15	125	125	1074	479	6111
246.9	7	0.563	ALLIANCE	4/0	15	125	125	1145	560	7704
312.8	19	0.642	BUTTE	266.8	15	125	125	1224	648	9450
394.5	19	0.72	CANTON	336.4	15	125	125	1302	757	11970
465.4	19	0.783	CAIRO	397.5	15	125	125	1365	850	14040
559.5	19	0.858	DARIEN	477	20	125	125	1440	970	16920
652.4	19	0.927	ELGIN	556.5	20	125	125	1519	1097	19710
740.8	37	0.99	FLINT	636	20	125	125	1582	1190	21960

The above data are approximate and subject to normal manufacturing tolerances.

Technical Data

## AAC Conductor 35 kV System

Size AWG	Number of Strands	Conductor Diameter	Conductor Shield Thickness	Inner Layer Thickness	Outer Layer Thickness	Approximate Outside Diameter	Approximate Net Weight	Rated Strength
		in	mils	mils	mils	in	lb/kft	lbs
1/0	7	0.336	15	175	125	1014	391	1791
2/0	7	0.376	15	175	125	1054	436	2259
3/0	7	0.423	15	175	125	1101	491	2736
4/0	7	0.475	15	175	125	1153	557	3447
266.8	19	0.537	15	175	125	1215	641	4473
336.4	19	0.603	15	175	125	1281	738	5535
397.5	19	0.659	15	175	125	1347	823	6399
477	19	0.722	15	175	125	1410	928	7524
556.5	37	0.780	20	175	125	1468	1020	8946
636	37	0.835	20	175	125	1523	1131	10260
795	37	0.932	20	175	125	1620	1326	12510

## ACSR Conductor 35 kV System

Size AWG	Number of Strands	Conductor Diameter	Conductor Shield Thickness	Inner Layer Thickness	Outer Layer Thickness	Approximate Outside Diameter	Approximate Net Weight	Rated Strength
		in	mils	mils	mils	in	lb/kft	lbs
1/0	6/1	0.398	15	175	125	1076	467	4161
2/0	6/1	0.447	15	175	125	1125	528	5035
3/0	6/1	0.502	15	175	125	1180	602	6289
4/0	6/1	0.563	15	175	125	1241	692	7933
266.8	26/7	0.642	15	175	125	1320	808	10735
336.4	18/1	0.684	15	175	125	1362	827	8246
336.4	26/7	0.720	15	175	125	1398	942	13395
397.5	18/1	0.743	15	175	125	1431	922	9443
397.5	24/7	0.772	15	175	125	1450	1017	13870
397.5	26/7	0.783	15	175	125	1461	1057	15485
477	24/7	0.846	15	175	125	1534	1156	16340
477	26/7	0.858	15	175	125	1546	1204	18525
477	30/7	0.883	15	175	125	1571	1307	22610
556.5	18/1	0.879	20	175	125	1567	1162	13015
556.5	24/7	0.914	20	175	125	1602	1292	18810
556.5	26/7	0.927	20	175	125	1615	1348	21470
636	18/1	0.940	20	175	125	1628	1290	14915
636	26/7	0.990	20	175	125	1678	1501	23940
795	26/7	0.1107	20	175	125	1795	1781	29925
795	45/7	0.1063	20	175	125	1751	1559	20995

## AAAC Conductor 35 kV System

Size AWG/Kcmil	Number of Strands	Conductor Diameter	Bare AAAC Codename	ACSR equivalent diameter	Conductor Shield Thickness	Inner Layer Thickness	Outer Layer Thickness	Approximate Outside Diameter	Approximate Net Weight	Rated Strength
		in		AWG/Kcmil	mils	mils	mils	in	lb/kft	lbs
123.3	7	0.398	AZUSA	1/0	15	175	125	1076	436	3843
155.4	7	0.447	ANAHEIM	2/0	15	175	125	1125	490	4851
195.7	7	0.502	AMHERST	3/0	15	175	125	1180	554	6111
246.9	7	0.563	ALLIANCE	4/0	15	175	125	1251	640	7704
312.8	19	0.642	BUTTE	266.8	15	175	125	1330	733	9450
394.5	19	0.72	CANTON	336.4	15	175	125	1408	847	11970
465.4	19	0.783	CAIRO	397.5	15	175	125	1471	945	14040
559.5	19	0.858	DARIEN	477	20	175	125	1546	1070	16920
652.4	19	0.927	ELGIN	556.5	20	175	125	1625	1202	19710
740.8	37	0.99	FLINT	636	20	175	125	1688	1299	21960

The above data are approximate and subject to normal manufacturing tolerances.