

## Aluminum Covered Line Wire Weatherproof Applications

Covered Line Wire is used primarily for overhead secondary distribution lines. It is not an electrically insulated conductor and is treated as bare conductor when installed.

Single Conductor Covered Line Wire is intended for use in overhead distribution circuits operating at primary or secondary voltages. The covering provides circuit protection against momentary contact with other conductors or trees. Because the covering carries no voltage rating, the conductors must be installed on insulators adequate for the intended service voltage. The user should consider the dielectric compatibility of the covering, insulator and conductor/insulator tie.

## Aluminum Covered Line Wire Weatherproof Construction

Conductors are aluminum alloy 1350-H19, 6201-181, or ACSR conductors, concentrically stranded and covered for weather proofing with polyethylene, high density polyethylene (HD) or crosslinked polyethylene (XLP).

## Aluminum Covered Line Wire Weatherproof Standards

- ASTM B-230- Aluminum 1350-H19 Wire for Electrical Purposes.
- ASTM B-231-Concentric-lay-stranded Aluminum Conductors, Coated-steel Reinforced(ACSR).
- ASTM B-1248 -Polyethylene Plastics Molding and Extrusion Materials.
- ASTM C-8.35- Specifications for Weather-resistant Polyethylene-Covered Wire and Cable.
- ICEA S-61-402-Covered Line Wire Aluminum Conductor.
- NEMA PUB NO.WC 5-1973-Standards Publication Thermoplastic Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy.

## ICEA S-61-402 Standard Covered Line Wire AAC All Aluminum Conductor Physical Performance Parameters

Code Name	Size AWG or kcmil	No.of Wires	Insulation Thickness mm	Nominal Diameter		Rated Strength kg	Nominal Weight				Ampacity amp
				Conductor mm	Cable mm		Aluminum kg/km	LDPE kg/km	HDPE kg/km	XLPE kg/km	
Plum	6	7	0.762	4.674	6.198	255	36.61	50.66	51.27	51.27	100
Apricot	4	7	0.762	5.715	7.239	400	58.19	75.57	76.33	76.33	135
Peach	2	7	1.143	7.417	9.703	612	92.56	126.09	127.55	127.55	180
Nectarine	1	7	1.143	8.433	11.481	789	116.67	167.31	169.52	169.52	210
Quince	1/0	7	1.524	9.347	12.395	903	147.48	203.70	206.14	206.14	240
Haw	1/0	19	1.524	9.474	12.522	980	147.48	204.49	206.96	206.96	240
Orange	2/0	7	1.524	11.786	14.834	1139	186.02	257.90	261.02	261.02	280
Lronwood	2/0	19	1.524	10.643	13.691	1211	186.02	250.41	253.21	253.21	280
Fig	3/0	7	1.524	13.259	16.307	1377	233.64	315.53	319.08	319.08	320
Lemon	3/0	19	1.524	11.938	14.986	1501	233.64	306.53	309.70	309.70	320
Olive	4/0	7	1.524	13.259	16.307	1728	296.14	378.04	381.58	381.58	370
Pomegranate	4/0	19	1.524	13.411	16.459	1823	296.14	379.09	382.69	382.69	370
Sassafras	250	19	1.524	14.580	17.628	2043	348.68	439.88	443.84	443.84	420
Mulberry	266.8	19	1.524	14.605	17.653	2182	372.19	463.59	467.55	467.55	460
Basswood	300	19	1.524	15.951	18.999	2404	419.66	520.91	525.30	525.30	478
Anona	336.4	19	1.524	16.916	19.964	2697	469.51	578.04	582.75	582.75	495
Chinquapin	350	19	1.524	17.221	20.269	2790	488.12	598.98	603.79	603.79	525
Molles	397.5	19	2.032	18.390	22.454	3123	555.08	707.29	713.88	713.88	550
Sumac	450	37	2.032	19.609	23.673	3719	628.00	791.79	798.89	798.89	600
Huckleberry	477	37	2.032	20.193	24.257	3810	665.21	834.63	841.98	841.98	610
Paw Paw	556.5	37	2.032								670

Breadfruit	636.0	61	2.413									720
Persimmon	795	61	2.413									825
Grapefruit	1033.5	61	2.413									970

**ICEA S-61-402 Standard Covered Line Wire ACSR Aluminum Conductor Physical Performance Parameters**

Code Name	Size	No. of Wires	Insulation Thickness	Nominal Diameter		Rated Strength	Nominal Weight				Ampacity	
				Conductor	Cable		Aluminum	Steel	LDPE	HDPE		XLPE
	AWG or kcmil		mm	mm	mm	kg	kg/km	kg/km	kg/km	kg/km	kg/km	A
Walnut	6	6/1	0.762	5.029	6.553	540	36.46		69.94	71.43	71.43	105
Butternut	4	6/1	0.762	6.350	7.874	844	58.04		107.15	170.15	108.64	135
Hickory	4	7/1	0.762	6.528	8.052	1070	58.04		120.54	122.03	123.52	135
Pignut	2	6/1	1.143	8.026	10.312	1293	92.27		175.60	177.09	178.58	180
Beech	2	7/1	1.143	8.357	10.643	1651	92.27		199.41	199.41	202.39	180
Chestnut	1	6/1	1.143	13.970	11.303	1610	116.37		217.27	218.76	220.25	210
Almond	1/0	6/1	1.524	10.109	13.157	1987	146.73		282.75	284.24	287.21	235
Pecan	2/0	6/1	1.524	11.354	14.402	2404	184.98		348.23	349.72	349.72	290
Filbert	3/0	6/1	1.524	12.751	15.799	3003	233.34		430.08	433.05	437.52	305
Buckeye	4/0	6/1	1.524	14.300	17.348	3787	294.21		531.27	535.74	540.20	345
Hackberry	266.8	18/1	1.524	15.469	18.517	3121	372.63		525.32	528.30	534.25	356

**ICEA S-61-402 Standard Covered Line Wire 6201 Aluminum Alloy Conductor Physical Performance Parameters**

Code Name	Size	No. of Wires	Insulation Thickness	Nominal Diameter		Rated Strength	Nominal Weight				Ampacity
				Conductor	Cable		Aluminum	LDPE	HDPE	XLPE	
	AWG or kcmil		mm	mm	mm	kg	kg/km	kg/km	kg/km	kg/km	amp
Maple	6	7	0.762	5.029	6.553	503	42.41	59.53	61.01	61.01	78
Hornbeam	4	7	0.762	6.350	7.874	798	67.56	89.29	90.78	92.12	145
Linden	2	7	1.143	8.026	10.312	1270	107.44	147.33	147.33	148.82	190
Oilnut	1/0	7	1.524	8.839	11.887	2023	170.99	238.11	247.03	247.03	250
Waterash	2/0	7	1.524	11.354	14.402	2445	215.63	291.68	302.01	302.01	290
Shellbark	3/0	7	1.524	12.751	15.799	3080	271.59	358.65	370.55	370.55	335
Planetree	4/0	7	1.524	14.300	17.348	3883	342.57	443.47	456.86	456.86	385