



Overview

The ASTM B231 25kV Aerial Cable AAC (compact) with a 3-layer track-resistant PE is specifically designed for use in tree wire or spacer cable configurations. This cable is manufactured, tested, and marked in accordance with ICEA S-121-733, adhering to the standards for Tree Wire and Messenger Supported Spacer Cable. The 3-layer system includes a conductor shield as layer #1, followed by a 2-layer covering (layers #2 and #3).

Application

This aerial cable is intended for overhead primary and secondary distribution systems rated at 25 kV (nominal), designed to prevent faults due to contact or space constraints. The track-resistant 3-layer system effectively mitigates short-circuits and flashovers resulting from contact with trees or wildlife. Proper installation of this cable system significantly reduces the risk of system outages, damage, or fires caused by falling trees or branches.

Tree Wire: Installed flatly in a configuration similar to bare or covered overhead conductors, with appropriate spacing on insulators. Self-supporting conductors like ACSR are commonly used in this setup.

Spacer Cable: Installed with uniform spacing in a diamond configuration using spacer hardware. Supported by a bare messenger such as bare aluminum clad steel, ACSR, OPGW, or galvanized steel wire, spacer cable assemblies occupy minimal space, making them suitable for narrow corridors or rights-of-way.

Construction

This single cable design features an AAC conductor with a 3-layer extruded shield and covering system:

Conductor: AAC (1350-H19, compact stranded).

Conductor Shield: An extruded semiconducting thermoplastic shield that is free stripping from the conductor and bonded to the covering.

Inner and Outer Covering Layers: Comprising low-, medium-, or high-density polyethylene (LDPE, MDPE, or HDPE), with the outer layer being track-resistant medium- or high-density polyethylene (TK-MDPE or TK-HDPE). All layers are tightly bonded together. The outer layer is available in black or gray, providing resistance to sunlight and tracking.

Specification

These cables are manufactured and tested to meet or exceed the following standards:

- ASTM B230 – Aluminum 1350–H19 Wire for Electrical Purposes
- ASTM B231 – Concentric-Lay-Stranded Aluminum 1350 Conductors
- ASTM B400 – Compact Round Concentric-Lay-Stranded Conductors
- ASTM D1248 – Polyethylene Plastics Extrusion Materials for Wire and Cable
- ICEA S-121-733 – Tree Wire and Messenger Supported Spacer Cable

Eastful Cable Lab



We have CNAS Accredited Facility to assure conformity assessment services with a focus on quality, expertise, and customer satisfaction.

CNAS has international mutual recognition among IAF, ILAC, APLAC and PAC.

Accreditation

We meet the requirements of ISO9001, ISO14001, ISO45001 and ISO50001 and our cables have certificate of CCC, RoHS, CASC, UL, cUL, TÜV Rheinland and CCS.



National Green Factory



Our facility has been awarded of National Green Factory by Ministry of Industry and Information Technology of China. We are committed to the development of high-end, intelligent and green manufacturing industry.

*The overall energy consumption level of green factories is better than the energy efficiency benchmark level.

● Technical Parameters

Conductor Size	Conductor Stranding	Conductor Dia.	Conductor Shield Thickness	Covering Thickness Inner Layer	Covering Thickness Outer Layer	Overall Dia.	Conductor Weight	Total Weight	Rated Strength
AWG or kcmil		inch	inch	inch	inch	inch	lb/FT	lb/FT	lb/FT
1/0	7	0.336	0.015	0.125	0.125	0.866	98.9	318	1990
2/0	7	0.376	0.015	0.125	0.125	0.906	124.8	358	2510
3/0	7	0.423	0.015	0.125	0.125	0.953	157.2	408	3040
4/0	7	0.475	0.015	0.125	0.125	1.005	198.4	468	3830
266.8	19	0.537	0.015	0.125	0.125	1.067	250.1	542	4970
336.4	19	0.603	0.015	0.125	0.125	1.133	315.5	631	6150
397.5	19	0.659	0.015	0.125	0.125	1.189	372.9	709	7110
477	19	0.722	0.015	0.125	0.125	1.252	446.8	806	8360
556.5	37	0.780	0.020	0.125	0.125	1.320	521.3	911	9940
636	37	0.835	0.020	0.125	0.125	1.375	596.1	1006	11400
795	37	0.932	0.020	0.125	0.125	1.472	745.3	1191	13900

NOTES

1. Dimensions and weights are subject to standard manufacturing tolerances and are subject to change without notice.

2. Cables are manufactured, tested and marked to meet or exceed the requirements in ICEA S-121-733 for tree wire and messenger supported spacer cable suitable for installation and use in systems rated 25 kV.