Aluminium Clad Steel Conductor

ASTM B415 · ASTM B416

Aluminium-clad steel stranded conductor — the corrosion-proof, high-strength earth and shield wire for overhead lines in the harshest atmospheres.

WIRE STANDARD	CONDUCTOR STANDARD	STRANDING	DUTY
ASTM B415	ASTM B416	3, 7, 19, 37 wires	Shield / earth wire, messenger

TYPICAL APPLICATIONS

- Overhead shield and earth wires
- ABC messengers on long spans
- Substation earthing conductors
- Guy and stay wire duty

CONSTRUCTION

- Steel core wires with bonded aluminium cladding
- Stranding from 3 to 37 wires
- Conductivity classes 14 % to 40 % IACS
- No grease or coating maintenance required
- Compatible with aluminium phase conductors and fittings

TECHNICAL DATA

Wire	Aluminium-clad steel, ASTM B415	**Breaking strength**	High-strength and extra-high-strength grades
Conductor	Concentric-lay stranded, ASTM B416	**Corrosion**	Bonded cladding — maintenance-free
Stranding	3, 7, 19, 37 wires	**Packing**	Steel or wooden drums, project lengths
Conductivity	14 %, 20.3 %, 27 %, 30 %, 40 % IACS		

Typical values. The final construction is confirmed on the order datasheet and the released drawing.

STANDARDS, TESTING AND DOCUMENTS

Routine tests	Conductor resistance, voltage test and insulation resistance on every length
Type tests	Type-test reports for each construction, witnessed by a third party on request
Documents with the drum	Packing list, drum list, routine test certificate, datasheet, CO / FORM A
Traceability	Drum number marked and recorded against the routine test certificate

OTHER CONSTRUCTIONS FROM THE SAME RANGE

OPGW Cable	www.zmsoverheadcable.com/products/special-overhead-conductors/opgw-cable/
ACSR Conductor	www.zmsoverheadcable.com/products/acsr-conductors/acsr-conductor/
Back to special conductors	www.zmsoverheadcable.com/products/special-overhead-conductors/

PACKING AND DELIVERY

Drum	Wooden or steel-framed export drum, 250–500 m per drum by cross-section
Packing	Sealed ends, protected lugs, desiccant, UV-resistant wrap
Marking	Drum no., designation, voltage, cross-section, length, gross weight
Lead time	15–25 working days for standard builds
Terms	FOB Qingdao, Tianjin or Shanghai. CIF, CFR and DAP on request

HOW TO ORDER

To quote, send the voltage class (U0/U), conductor material and cross-section, screen or armour, sheath, drum length, delivery port and the standard the project specifies. We return a released drawing, the test programme and a drum plan with the quotation.

SELECTION NOTES

ACS or galvanised steel for the earth wire?
Galvanised steel is cheaper but the zinc layer eventually erodes, especially in coastal air. ACS keeps its protection for the life of the line and avoids a galvanic couple with aluminium phase conductors.

Which conductivity class should I choose?
Higher conductivity classes carry more fault current; lower classes carry more load. Match the class to the fault duty and mechanical design — we can review both.

Can ACS serve as an ABC messenger?
Yes. For long-span ABC bundles, an ACS messenger provides the highest strength-to-weight of the messenger options.

Certification. Environmental management to ISO 14001:2015 and occupational health and safety to ISO 45001:2018, with CE marking under the EU low-voltage and EMC directives. Independent inspection and type testing are carried out through ISO/IEC 17020 and 17025 accredited laboratories. Certificate numbers and validity dates are published at www.zmsoverheadcable.com/certificates/.

Request a quotation for this cable

Send the specification sheet or the cable schedule and we return a released drawing, the test programme and a drum plan with the price.

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