Bare Conductor – Overhead Lines

CIMET® ACSR

Designation:
ACSR

Conductor Material:
Hard-Drawn Aluminum

Manufacturing and Testing Standard:
IRAM 2187-1

However, we are also able to meet the requirements of other applicable standards or specifications.



A1/S1A



DESCRIPTION

Bare conductor for overhead lines, consisting of hard-drawn pure aluminum wires helically stranded in successive layers over a normal-strength galvanized steel core. A corrosion-inhibiting grease is applied between the outermost layer of galvanized steel wires and the first layer of aluminum wires. CIMET identification is provided by a white identification thread positioned between the wire layers.

APPLICATION

For use in overhead electric power transmission and distribution lines.

Designation / Al/Steel Cross-sectional Area (mm²)	Total Cross-sectional Area (mm²)	No. of Aluminum Wires × mm	No. of Steel Wires × mm	Approx. Diameter (mm)	Approx. Mass (kg/km)	Max. DC Electrical Resistance (Ω/km at 20 °C)	Max. AC Electrical Resistance (Ω/km at 80 °C)	Current-Carrying Capacity (A)*
ACSR 16/2,5	17,8	6x1,8	1x1,8	5,4	62	1,88	2,3286	100
ACSR 25/4	27,8	6x2,25	1x2,25	6,8	96	1,2	1,4936	133
ACSR 35/6	40,1	6x2,7	1x2,7	8,1	139	0,835	1,0373	167
ACSR 50/8	56,3	6x3,2	1x3,2	9,6	195	0,595	0,7385	206
ACSR 70/12	81,3	26x1,85	7x1,44	11,7	282	0,413	0,5131	260
ACSR 95/15	109,7	26x2,15	7x1,67	13,6	380	0,306	0,380	314
ACSR 120/20	141,4	26x2,44	7x1,9	15,5	490	0,237	0,2951	369
ACSR 150/25	173,1	26x2,7	7x2,1	17,1	600	0,194	0,2411	418
ACSR 185/30	213,6	26x3	7x2,33	19	740	0,157	0,1954	477
ACSR 210/35	243,2	26x3,2	7x2,49	20,3	843	0,138	0,1718	518
ACSR 240/40	282,5	26x3,45	7x2,68	21,8	979	0,119	0,1479	568
ACSR 300/50	353,7	26x3,86	7x3	24,4	1226	0,0949	0,1183	655
ACSR 340/30	369,1	48x3	7x2,33	25	1170	0,0851	0,1064	696
ACSR 380/50	431,2	54x3	7x3	27	1441	0,0757	0,0947	752
ACSR 435/55	490,6	54x3,2	7x3,2	28,8	1639	0,0666	0,0835	816
ACSR 550/70	620,9	54x3,6	7x3,6	32,4	2075	0,0526	0,0663	946
ACSR 680/85	764,5	54x4	19x2,4	36	2548	0,0426	0,0542	1080

(*): Conductor temperature: 80 °C; ambient temperature: 40 °C; exposed to direct sunlight; wind speed: 0.6 m/s.

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Designation / Al/Steel Cross-sectional Area (mm²)	Number of Wires	Minimum Breaking Load (kN)	Modulus of Elasticity (1) (MPa)	Coefficient of Thermal Expansion (1/°C)
ACSR 16/2,5	7h 6/1	5,8	81000	19,1x10-6
ACSR 25/4	7h 6/1	8,9	81000	19,1x10-6
ACSR 35/6	7h 6/1	12,4	81000	19,1x10-6
ACSR 50/8	7h 6/1	16,8	81000	19,1x10-6
ACSR 70/12	33h 26/7	26,3	77000	18,9x10-6
ACSR 95/15	33h 26/7	34,9	77000	18,9x10-6
ACSR 120/20	33h 26/7	44,5	77000	18,9x10-6
ACSR 150/25	33h 26/7	53,7	77000	18,9x10-6
ACSR 185/30	33h 26/7	65,3	77000	18,9x10-6
ACSR 210/35	33h 26/7	73,4	77000	18,9x10-6
ACSR 240/40	33h 26/7	85,1	77000	18,9x10-6
ACSR 300/50	33h 26/7	105	77000	18,9x10-6
ACSR 340/30	55 h 48/7	91,7	62000	20,9x10-6
ACSR 380/50	61h 54/7	121	70000	19,3x10-6
ACSR 435/55	61h 54/7	134	70000	19,3x10-6
ACSR 550/70	61h 54/7	166	70000	19,3x10-6
ACSR 680/85	73h 54/19	207	68000	19,4x10-6

(1) The values indicated are for information purposes only and shall not be considered as test requirements. They are applicable within a mechanical tension range of 15% to 50% of the conductor's rated breaking load. Tolerance: ±3,000 MPa.

PRODUCT CERTIFICATION

IRAM
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The components used in this conductor are potentially recyclable. Recovering and returning these materials for reuse allows them to re-enter the production cycle, providing a twofold environmental benefit: reducing waste generation and decreasing the consumption of primary metals.

"The information provided in this Technical Data Sheet is for reference purposes only and is subject to change and/or update without prior notice. Furthermore, it does not constitute a statement of suitability of our products for any specific application. Therefore, we recommend consulting a suitably qualified professional to ensure the proper detailed engineering and sizing of your project or installation."