



-the nation's live wire-

ALUMINUM CONDUCTORS STEEL-REINFORCED (ACSR)



Specification: BS 215, Part 2

Construction: six or more aluminium wires built up in concentric layer(s) around galvanized steel wire or galvanized steel strands

Application: overhead power transmission

Nominal aluminium area mm ²	Number and nominal diameter of stranded wires		Sectional area of aluminium mm ²	Approximate overall diameter mm	Calculated DC resistance per km at 20° C ohm	Calculated breaking load kN	Approximate mass per km kg	Standard unit length m
	Aluminium mm	Steel mm						
25	6/2.36	1/2.36	26.24	7.08	1.093	9.61	106	2,000
30	6/2.59	1/2.59	31.61	7.77	0.9077	11.45	128	2,000
40	6/3.00	1/3.00	42.41	9.00	0.6766	15.20	172	2,000
50	6/3.35	1/3.35	52.88	10.05	0.5426	18.35	214	2,000
70	12/2.79	7/2.79	73.37	13.95	0.3936	61.20	538	2,000
100	6/4.72	7/1.57	105.0	14.15	0.2733	32.70	394	2,000
150	30/2.59	7/2.59	158.1	18.13	0.1828	69.20	726	2,000
150	18/3.35	1/3.35	158.7	16.75	0.1815	35.70	506	2,000
175	30/2.79	7/2.79	183.4	19.53	0.1576	79.80	842	2,000
175	18/3.61	1/3.61	184.3	18.05	0.1563	41.10	587	2,000
200	30/3.00	7/3.00	212.1	21.00	0.1363	92.25	974	2,000
200	18/3.86	1/3.86	210.6	19.30	0.1367	46.55	671	2,000
250	30/3.35	7/3.35	264.4	23.45	0.1093	111.2	1214	2,000
350	54/3.00	7/3.00	381.7	27.00	0.07574	120.9	1433	1500
400	54/3.18	7/3.18	428.9	28.62	0.06740	131.9	1,621	1,500

ACSR: Aluminium Conductors Steel-Reinforced



Nominal aluminium area mm ²	Calculate mass of aluminium per km kg	Calculated mass of steel per km kg	Approximate total mass per km kg
25	72	34	106
30	87	41	128
40	117	55	172
50	145	69	214
70	203	335	538
100	288	106	394
150	437	289	726
150	437	69	506
175	507	335	842
175	508	80	588
200	586	388	974
200	580	91	671
250	731	484	1215
350	1055	388	1443
400	1186	436	1622