BARE OVERHEAD CONDUCTORS

28. AAC 1350 – ALL ALUMINIUM CONDUCTORS

These conductors are used in low, medium and high voltage overhead lines for power Transmission. AAC has seen extensive use in urban areas where spans are usually short but high conductivity us required. The excellent corrosion resistance of aluminium has made AAC a conductor of choice in coastal areas.

STANDARD	AS/NZS 1531
CONDUCTOR	Aluminium 1350 (Class 2)

Product Name	Conductor			Approximate Mass kg/km	Calculated breaking load (min.) kN
	No./mm	mm²	Diameter		
LEO	7/2.50	34.4	7.5	94.3	5.7
LEONIDS	7/2.75	41.6	8.3	113.0	6.7
LIBRA	7/3.00	49.5	9.0	135.0	8.0
MARS	7/3.75	77.3	11.3	211.0	11.8
MERCURY	7/4.50	111.0	13.5	304.0	16.9
MOON	7/4.75	124.0	14.3	339.0	18.9
NEPTUNE	19/3.25	158.0	16.3	433.0	24.7
ORION	19/3.50	183.0	17.5	503.0	28.7
PLUTO	19/3.75	210.0	18.8	576.0	31.9
SATURN	37/3.00	262.0	21.0	721.0	42.2
SIRIUS	37/3.25	307.0	22.8	845.0	48.2
TAURUS	19/4.75	337.0	23.8	924.0	51.3
TRITON	37/3.75	409.0	26.3	1,120.0	62.2
TROJANS	61/3.00	431.0	27.0	1,192.0	66.0
URANUS	61/3.25	506.0	29.3	1,400.0	75.2
URSULA	61/3.50	587.0	31.5	1,620.0	87.3
VENUS	61/3.75	673.4	33.8	1,860.0	97.2

BARE OVERHEAD CONDUCTORS

29. AAAC 1120 – ALL ALUMINIUM ALLOY CONDUCTORS

All Aluminium Alloy Conductors (AAAC) are extensively used for primary and secondary transmission in bare overhead distribution and transmission lines and substations where higher span is required. Also, usable in highly polluted industrial areas and coastal regions due to corrosion resistance.

STANDARD	AS/NZS 1531
CONDUCTOR	Aluminium Alloy 1120 (Class 2)

Product Name	Conductor			Approximate Mass kg/km	Calculated breaking load (min.) kN
	No./mm	mm²	Diameter		
CHLORINE	7/2.50	34.4	7.5	94.3	8.2
CHROMIUM	7/2.75	41.6	8.3	113	9.9
FLUORINE	7/3.00	49.5	9	135	11.8
HELIUM	7/3.75	77.3	11.3	212	17.6
HYDROGEN	7/4.50	111	13.5	304	24.3
IODINE	7/4.75	124	14.3	339	27.1
KRYPTON	19/3.25	158	16.3	433	37.4
LUTETIUM	19/3.50	183	17.5	503	41.7
NEON	19/3.75	210	18.8	576	47.8
NITROGEN	37/3.00	262	21	721	62.2
NOBELIUM	37/3.25	307	22.8	845	72.8
OXYGEN	19/4.75	337	23.8	924	73.6
PHOSPHORUS	37/3.75	409	26.3	1120	93.1
RHODIUM	61/3.00	431	27	1192	97
SELENIUM	61/3.25	506	29.3	1400	114
SILICON	61/3.50	587	31.5	1620	127
SULFUR	61/3.75	674	33.8	1860	145

BARE OVERHEAD CONDUCTORS

30. ACSR – ALUMINIUM CONDUCTORS STEEL REINFORCED

ACSR conductors are used as bare overhead transmission and as primary and secondary distribution cable. This wire is suitable for use in all practical spans on wood poles, transmission towers, and other structures. Applications range from long, extra high voltage (EHV) transmission lines to sub-service spans at distribution or utilization voltages on private premises.

ACSR has a long service record because of its economy, dependability, and strength to weight ratio. The combined light weight and high conductivity of Aluminium with strength of the steel core enables higher tensions, less sag, and longer spans than any alternative.

STANDARD	AS 3607
CONDUCTOR	Aluminium 1350, Galvanaised Steel (Class 2)

Product Name	Conductor				Approximate Mass kg/km	Calculated breaking load (min.) kN
	Aluminium No./mm	Galv. Steel No./mm	mm²	Diameter		
ALMOND	6/2.50	1/2.50	34.4	7.5	119	10.5
APRICOT	6/2.75	1/2.75	41.6	8.3	144	12.6
APPLE	6/3.00	1/3.00	49.5	9	171	14.9
BANANA	6/3.75	1/3.75	77.3	11.3	268	22.7
CHERRY	6/4.75	7/1.60	120.4	14.3	402	33.4
GRAPE	30/2.50	7/2.50	182	17.5	677	63.5
LEMON	30/3.00	7/3.00	262	21	973	90.4
LYCHEE	30/3.25	7/3.25	307	22.8	1140	105
LIME	30/3.50	7/3.50	356	24.5	1320	122
MANGO	54/3.00	7/3.00	431	27	1440	119
ORANGE	54/3.25	7/3.25	506	29.3	1690	137
OLIVE	54/3.50	7/3.50	587	31.5	1960	159