



**ACSR CABLES**

**ACSR CONDUCTOR**

**Size as per ISS**

Code Name	Area Code	Calculated Area MM <sup>2</sup>	Aluminium No / Dia	Steel No / Dia	Aluminium Kg/Km	Steel Kg/Km	Total Wt.Kg/Km	BREAKING LOAD	
	Sq mm				Wt.	Wt.		ALU.	STEEL
				( Before / After )					
MOLE	6.5	12.4	6/1.50	1/1.50	29.250	13.750	43.000	0.32/0.30	2.46/2.34
SQUIRREL	13	24.43	6/2.11	1/2.11	57.700	27.300	85.000	0.63/0.60	4.60/4.37
GOPHER	16	30.6	6/2.36	1/2.36	71.900	34.100	106.00		
WEASEL	20	37	6/2.59	1/2.59	86.800	41.200	128.000	0.89/0.85	6.92/6.57
FERRET	25	49.6	6/3.00	1/3.00	116.200	54.800	171.000	1.17/1.11	9.29/8.83
RABBIT	30	61.9	6/3.35	1/3.35	145.000	69.000	214.000	1.43/1.36	11.38/11.0
PRINK	40	73.9	6/3.66	1/3.66	172.900	82.100	255.000		
HORSE	42	116.1	12/2.79	7/2.79	210.000	332.000	542.000		
BEAVER	45	87.7	6/3.99	1/3.99	205.500	57.500	263.000		
RACCOON	48	99.1	6/4.09	1/4.09	215.500	102.500	318.000	2.08/1.98	17.27/16.4
OTTER	50	98	6/4.22	1/4.22	229.900	109.100	339.000		
CAT	55	113	6/4.50	1/4.50	261.000	124.000	385.000		
DOG	65	118.45	6/4.72	7/1.57	287.600	106.400	394.000	2.78/2.64	2.70/2.57
LEOPARD	80	150.1	6/5.28	7/1.76	359.500	133.500	493.000		
COYOTE	80	157.6	26/2.54	7/1.90	365.200	155.800	521.00		
TIGER	80	162	30/2.36	7/2.36	368.500	240.500	609.000		
WOLF	95	195	30/2.59	7/2.59	447.500	279.500	727.000	0.89/0.85	6.92/6.57
LYNX	110	226	30/2.79	7/2.79	508.000	336.000	844.000		
PANTHER	130	262	30/3.00	7/3.00	587.400	388.600	976.000	1.17/1.11	9.29/8.83
LION	140	295	30/3.18	7/3.18	660.400	436.000	1096.400	1.43/1.36	10.43/9.91
BEAR	160	326	30/3.35	7/3.35	729.000	493.000	1222.000	1.43/1.36	11.38/11.0
GOAT	185	400	30/3.71	7/3.71	898.000	594.000	1492.000		
SHEEP	225	463	30/3.99	7/3.99	1039.000	687.000	1726.000		
KUNDAH	250	428	42/3.50	7/1.94	1304.400	477.600	1782.000		
DEER	260	531	30/4.27	7/4.27	1190.000	787.000	1977.000		
ZEBRA	260	558	54/3.18	7/3.18	1186.500	434.500	1621.000	1.29/1.23	10.43/9.91
ELK	300	589	30/4.50	7/4.50	1321.500	874.500	2196.000		
CAMEL	300	539	54/3.35	7/3.35	1320.500	483.500	1804.000	1.43/1.36	11.38/11.0
MOOSE	325	598	54/3.53	7/3.53	1464.000	538.000	2002.000	1.57/1.49	12.86/12.22

ACSR CONDUCTOR								IS : 398 [PART-II]
Code Name	Resistance At 20°C	Tensile Strength	Overall Diameter	Current Rating		Inductive Reactance		Calculated Breaking Load
	Ohm/km	N/mm <sup>2</sup>	Mm	In Still Air	With Wind	30 MM	50 MM	
				A	A	Spacing	Spacing	
MOLE	2.718	407	4.50	40	70	0.352	0.374	3.97
SQUIRREL	1.374	771	6.33	76	120	0.325	0.355	7.61
GOPHER	1.098	952	7.09	85	130	0.318	0.349	
WEASEL	0.9116	1136	7.77	95	150	0.314	0.345	11.12
FERRET	0.6795	1503	9.00	115	175	0.308	0.339	
RABBIT	0.5449	1860	10.05	135	200	0.305	0.335	18.25
MINK	0.4565	2207	11.00	165	250	0.302	0.353	
HORSE	0.3977	6108	13.95	185	270	0.296	0.327	
BEAVER	0.3841	2613	12.00	176	257	0.299	0.327	
RACCOON	0.3656	2746	12.30	180	260	0.298	0.329	26.91
OTTER	0.3434	2923	12.60	185	270	0.297	0.328	
CAT	0.3020	3324	13.50	195	290	0.296	0.327	
DOG	0.2745	3299	14.20	205	305	0.283	0.315	32.41
LEOPARD	0.2193	4137	15.85	275	395	0.259	0.282	
COYOTE	0.2214	4638	16.86	260	380	0.238	0.268	
TIGER	0.2221	5758	16.50	265	385	0.240	0.271	
WOLF	0.1844	6880	18.10	305	425	0.235	0.266	67.34
LYNX	0.1589	7950	19.60	335	470	0.230	0.261	
PANTHER	0.1375	9127	21.00	370	510	0.225	0.256	89.67
LION	0.1223	10210	22.30	405	560	0.222	0.252	
BEAR	0.1102	11310	22.90	430	590	0.220	0.250	
GOAT	0.08989	13780	26.00	495	665	0.213	0.224	
SHEEP	0.07771	15910	28.00	554	745	0.210	0.240	
KUNDAH	0.07213	9002	26.82	575	775	0.211	0.242	88.79
DEER	0.06786	18230	29.90	590	800	0.207	0.237	
ZEBRA	0.06915	13245	28.62	610	812	0.205	0.237	130.32
ELK	0.06110	20240	31.50	630	850	0.206	0.235	
CAMEL	0.06125	14750	30.20	610	825	0.207	0.237	
MOOSE	0.05517	16250	31.80	665	880	0.206	0.235	

LAY - RATIO				Final Modulus of Elasticity GN/m <sup>2</sup>	Coefficient of Linear Expansion
Aluminium	Steel	Outermost layer			
6	1	10	14	79	19.1 x 10 <sup>-6</sup>
6	7	10	14	75	19.8 x 10 <sup>-6</sup>
30	7	10	14	80	17.8 x 10 <sup>-6</sup>
42	7	10	14	62	21.51 x 10 <sup>-6</sup>
54	7	10	14	69	19.3 x 10 <sup>-6</sup>

**AAC / AAAC Conductor**

**IS : 398 (Part - I)**

Code Name	AREA CODE	Calculated Area MM <sup>2</sup>	Aluminium No / Dia	Aluminium Kg / Km	Resistance at 20 <sup>0</sup> C	Overall Diameter	Breaking Load
	Sq mm			Wt.	Ohm / Km	MM	
MODEL	10	12.21	7/1.49	33.680	2.697	4.47	3.41
SQUIRREL	20	24.82	7/2.09	65.680	1.370	6.27	6.72
WEASEL	30	36.03	7/2.56	98.500	0.913	7.68	10.04
RABBIT	50	60.24	7/3.31	164.700	0.5465	9.93	16.82
RACCOON	80	90.31	19/2.46	248.100	0.3663	12.30	25.87
DOG	100	116.6	19/2.79	320.300	0.2848	13.95	32.35
WOLF	150	180.2	37/2.49	496.300	0.1840	17.43	50.26
PANTHER	200	241	37/2.88	663.800	0.1375	20.16	67.49
KUNDAH	400	446.6	37/3.92	1230.000	0.07425	27.44	124.80
ZEBRA	420	487.5	61/3.19	1345.500	0.06815	28.71	129.00
MOOSE	520	603.7	61/3.68	1666.200	0.05502	31.95	159.08
MORKULLA	560	649	61/3.68	1791.240	0.05120	33.12	171.80

Code Name	AREA CODE	Aluminium No. Dia	Aluminium Kg/Km	Current Rating
	Sq mm		Wt.	
ROSE	13	7/1.96	58.000	A
LILY	16	7/2.21	73.000	160
GNAT	20	7/2.44	89.000	180
LADY BIRD	25	7/2.79	117.000	215
ANT	30	7/3.10	144.000	250
FLY	40	7/3.40	174.000	279
BLUE BOTTLE	45	7/3.65	201.000	310
EARWIG	48	7/3.70	215.000	318
GRASSHOPPER	50	7/3.91	230.000	340
ELEG	60	7/4.17	251.000	370
WASP	65	7/4.39	290.000	395
	80	19/3.10	369.000	475
E	90	19/3.18	414.000	500
	110	19/3.53	511.000	575
X	130	19/3.78	586.000	622
	140	19/3.99	652.000	665
T	160	19/4.22	730.000	745
	185	19/4.65	886.000	838
R	225	19/5.00	1025.000	920
	260	19/5.36	1176.000	1000
A	300	37/4.09	1343.000	1080