TACSR

(Thermal Resistant Aluminium Conductor Galvanized Steel Reinforced)

Standard Specification : ASTM B 232 : 2011 & JEC 3406 : 2010

Technical Properties

Type	Number / Diameter of Wire		Calculated Cross Section Area		Approx. Overall Diameter	Approx. Weight of Conductor	Calculated Breaking Load	DC Resistance at 20 °C Max.	Current Carrying Capacity *	Standard Length per Reel
	TAL	GSW	TAL	GSW						
	No. / mm	No. / mm	mm²	mm²	mm	kg/km	kN	Ohm/km	A	m
Thraser	76 / 4.43	19 / 2.07	1171	63.9	45.79	3,759	251.9	0.0253	2,471	1,000
Kiwi	72 / 4.41	7 / 2.94	1100	47.5	44.10	3,431	221.7	0.0269	2,372	1,000
Bluebird	84 / 4.07	19 / 2.44	1093	88.8	44.76	3,736	268.0	0.0271	2,378	1,000
Chukar	84 / 3.70	19 / 2.22	903	73.5	40.70	3,089	227.8	0.0328	2,111	1,000
Falcon	54 / 4.36	19 / 2.62	806	102.4	39.26	3,046	243.0	0.0367	1,978	1,000
Lapwing	45 / 4.78	7 / 3.18	808	55.6	38.22	2,670	187.4	0.0365	1,965	1,000
Parrot	54 / 4.25	19 / 2.55	766	97.0	38.25	2,892	230.5	0.0386	1,913	1,000
Nuthatch	45 / 4.65	7 / 3.10	764	52.8	37.20	2,529	177.6	0.0385	1,897	1,000
Plover	54 / 4.14	19 / 2.48	727	91.8	37.24	2,742	218.4	0.0407	1,849	1,000
Bobolink	45 / 4.53	7 / 3.02	725	50.1	36.24	2,400	170.5	0.0406	1,834	1,000
Martin	54 / 4.02	19 / 2.41	685	86.7	36.17	2,586	206.1	0.0432	1,781	1,000
Dipper	45 / 4.40	7 / 2.93	684	47.2	35.19	2,263	160.7	0.0430	1,766	2,000
Pheasant	54 / 3.90	19 / 2.34	645	81.7	35.10	2,435	194.1	0.0459	1,712	2,000
Bittern	45 / 4.27	7 / 2.85	644	44.7	34.17	2,133	151.6	0.0457	1,699	2,000
Skylark	36 / 4.78	1 / 4.78	646	17.9	33.46	1,919	115.4	0.0454	1,693	2,000
Grackle	54 / 3.77	19 / 2.27	603	76.9	33.97	2,280	184.2	0.0491	1,639	2,000
Bunting	45 / 4.14	7 / 2.76	606	41.9	33.12	2,004	142.4	0.0486	1,632	2,000
Finch	54 / 3.65	19 / 2.19	565	71.6	32.85	2,133	174.6	0.0524	1,570	2,000
Bluejay	45 / 4.00	7 / 2.66	565	38.9	31.98	1,870	132.7	0.0521	1,560	2,000
Curlew	54 / 3.51	7 / 3.51	523	67.7	31.59	1,976	161.5	0.0564	1,495	2,000
Ortolan	45 / 3.85	7 / 2.57	524	36.3	30.81	1,734	123.3	0.0562	1,484	2,000
Tanager	36 / 4.30	1 / 4.30	523	14.5	30.10	1,553	93.4	0.0561	1,475	2,000
Cardinal	54 / 3.38	7 / 3.38	485	62.8	30.42	1,833	149.7	0.0608	1,423	2,000
Rail	45 / 3.70	7 / 2.47	484	33.5	29.61	1,602	116.1	0.0609	1,409	2,000
Catbird	36 / 4.14	1 / 4.14	485	13.5	28.98	1,440	86.6	0.0605	1,403	2,000
Canary	54 / 3.28	7 / 3.28	456	59.1	29.52	1,726	141.0	0.0646	1,368	2,000
Ruddy	45 / 3.59	7 / 2.40	456	31.7	28.74	1,509	109.4	0.0647	1,354	2,000

*Note :

Ambient temperature	: 40° C	Conductivity of TAL	: 60% IACS
Wind velocity	: 0.5 m/sec	Solar absorbtion coefficient	: 0.5
Continuous operating temperature of conductor	: 150°C	Emissivity with respect to black body	: 0.6

20C28-00 Rev. 1.0 / 2014

Technical Properties

Type	Number / Diameter of Wire		Calculated Cross Section Area		Approx. Overall Diameter	Approx. Weight of Conductor	Calculated Breaking Load	DC Resistance at 20 °C Max.	Current Carrying Capacity *	Standard Length per Reel
	TAL	GSW	TAL	GSW						
	No. / mm	No. / mm	mm²	mm²	mm	kg/km	kN	Ohm/km	A	m
Mallary	30 / 4.14	19 / 2.48	404	91.8	28.96	1,841	171.2	0.0731	1,278	2,000
Condor	54 / 3.08	7 / 3.08	402	52.2	27.72	1,522	124.3	0.0732	1,259	2,000
Tern	45 / 3.38	7 / 2.25	404	27.8	27.03	1,335	97.5	0.0729	1,250	2,000
Drake	26 / 4.44	7 / 3.45	403	65.4	28.11	1,627	139.7	0.0732	1,265	2,000
Cuckoo	24 / 4.62	7 / 3.08	402	52.2	27.72	1,522	123.8	0.0732	1,259	2,000
Coot	36 / 3.77	1 / 3.77	402	11.2	26.39	1,194	72.9	0.0729	1,240	2,000
Redwing	30 / 3.92	19 / 2.35	362	82.4	27.43	1,651	153.7	0.0815	1,189	2,000
Starling	26 / 4.21	7 / 3.28	362	59.1	26.68	1,465	125.9	0.0814	1,180	2,000
Stilt	24 / 4.39	7 / 2.92	363	46.9	26.32	1,372	113.3	0.0811	1,176	2,000
Gannet	26 / 4.07	7 / 3.16	338	54.9	25.76	1,366	117.3	0.0871	1,127	2,000
Flamingo	24 / 4.23	7 / 2.82	337	43.7	25.38	1,276	105.5	0.0873	1,120	2,000
Egret	30 / 3.70	19 / 2.22	323	73.5	25.90	1,472	140.6	0.0915	1,102	2,000
Scooter	30 / 3.70	7 / 3.70	323	75.3	25.90	1,484	135.5	0.0915	1,102	2,000
Grosbeak	26 / 3.97	7 / 3.09	322	52.5	25.15	1,302	111.9	0.0915	1,091	2,000
Rook	24 / 4.14	7 / 2.76	323	41.9	24.84	1,222	101.0	0.0912	1,089	2,000
Swift	36 / 3.38	1 / 3.38	323	9.0	23.66	960	60.7	0.0907	1,074	2,000
Kingbird	18 / 4.78	1 / 4.78	323	17.9	23.90	1,030	68.0	0.0907	1,077	2,000
Teal	30 / 3.61	19 / 2.16	307	69.6	25.24	1,398	133.4	0.0962	1,066	2,000
Wood Duck	30 / 3.61	7 / 3.61	307	71.6	25.27	1,413	129.0	0.0962	1,067	2,000
Squab	26 / 3.87	7 / 3.01	306	49.8	24.51	1,236	108.1	0.0963	1,055	2,000
Peacock	24 / 4.03	7 / 2.69	306	39.8	24.19	1,159	95.9	0.0962	1,051	2,000
Eagle	30 / 3.46	7 / 3.46	282	65.8	24.22	1,298	122.9	0.1047	1,008	2,000
Dove	26 / 3.72	7 / 2.89	283	45.9	23.55	1,142	101.1	0.1042	1,001	2,000
Parakeet	24 / 3.87	7 / 2.58	282	36.6	23.22	1,068	88.3	0.1043	996	2,000
Ospray	18 / 4.47	1 / 4.47	282	15.7	22.35	900	59.4	0.1038	986	2,000
Hen	30 / 3.20	7 / 3.20	241	56.3	22.40	1,110	105.2	0.1224	909	2,000
Hawk	26 / 3.44	7 / 2.68	242	39.5	21.80	978	86.7	0.1219	903	2,000
Flicker	24 / 3.58	7 / 2.39	242	31.4	21.49	915	76.8	0.1219	898	2,000
Pelican	18 / 4.14	1 / 4.14	242	13.5	20.70	772	51.0	0.1210	891	2,000
Lark	30 / 2.92	7 / 2.92	201	46.9	20.44	924	90.3	0.1470	805	2,000
Ibils	26 / 3.14	7 / 2.44	201	32.7	19.88	814	72.1	0.1463	799	2,000
Brant	24 / 3.27	7 / 2.18	202	26.1	19.62	762	64.7	0.1461	796	2,000
Chickadee	18 / 3.77	1 / 3.77	201	11.2	18.85	640	43.4	0.1459	787	2,000
Oriole	30 / 2.69	7 / 2.69	170	39.8	18.83	785	77.4	0.1732	722	2,000
Linnet	26 / 2.89	7 / 2.25	171	27.8	18.31	690	62.8	0.1727	716	2,000
Merlin	18 / 3.47	1 / 3.47	170	9.5	17.35	543	38.2	0.1722	705	2,000
Ostrich	26 / 2.73	7 / 2.12	152	24.7	17.28	615	56.6	0.1935	664	2,000
Partridge	26 / 2.57	7 / 2.00	135	22.0	16.28	545	50.2	0.2184	613	2,000
Waxwing	18 / 3.09	1 / 3.09	135	7.5	15.45	430	30.3	0.2171	605	2,000
Penguin	6 / 4.77	1 / 4.77	107	17.9	14.31	433	35.3	0.2720	527	2,000
Cochin	12 / 3.37	7 / 3.37	107	62.4	16.85	785	91.8	0.2752	553	2,000
Brahma	16 / 2.86	19 / 2.48	103	91.8	18.12	1,005	126.5	0.2865	555	2,000
Dorking	12 / 3.20	7 / 3.20	96.5	56.3	16.00	708	82.8	0.3052	516	2,000
Dotterel	12 / 3.08	7 / 3.08	89.4	52.2	15.40	656	76.7	0.3294	491	2,000
Pigeon	6 / 4.25	1 / 4.25	85.1	14.2	12.75	344	28.0	0.3427	453	2,000
Guinea	12 / 2.92	7 / 2.92	80.4	46.9	14.60	589	71.1	0.3665	453	2,000
Leghorn	12 / 2.69	7 / 2.69	68.2	39.8	13.45	500	60.7	0.4319	410	2,000
Quail	6 / 3.78	1 / 3.78	67.3	11.2	11.34	272	23.3	0.4332	388	2,000

*Note :

Ambient temperature	: 40° C	Conductivity of TAL	: 60% IACS
Wind velocity	: 0.5 m/sec	Solar absorbtion coefficient	: 0.5
Continuous operating temperature of conductor	: 150°C	Emissivity with respect to black body	: 0.6

20C28-00 Rev. 1.0 / 2014

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	TAL	GSW	TAL	GSW						
	No. / mm	No. / mm	mm²	mm²	mm	kg/km	kN	Ohm/km	A	m
Minorca	12 / 2.44	7 / 2.44	56.1	32.7	12.20	412	50.2	0.5249	361	2,000
Raven	6 / 3.37	1 / 3.37	53.5	8.9	10.11	216	19.4	0.5450	334	2,000
Petrel	12 / 2.34	7 / 2.34	51.6	30.1	11.70	379	46.2	0.5707	342	2,000
Robin	6 / 3.00	1 / 3.00	42.4	7.1	9.00	171	15.8	0.6877	287	2,000
Grouse	8 / 2.54	1 / 4.24	40.5	14.1	9.32	222	21.5	0.7230	283	2,000
Sparate	7 / 2.47	1 / 3.30	33.5	8.6	8.24	159	16.1	0.8696	249	2,000
Sparrow	6 / 2.67	1 / 2.67	33.6	5.6	8.01	136	12.7	0.8682	247	2,000
Swanate	7 / 1.96	1 / 2.61	21.1	5.4	6.53	100	10.5	1.381	184	2,000
Swan	6 / 2.12	1 / 2.12	21.2	3.5	6.36	86	8.4	1.377	183	2,000

*Note :

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20C28-00 Rev. 1.0 / 2014