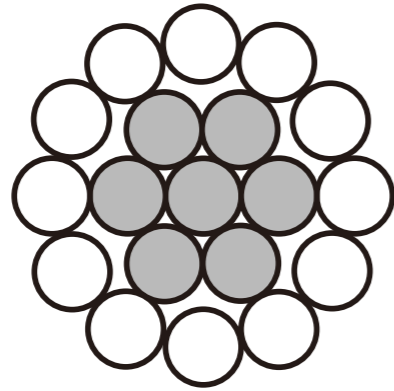


# Aluminium Conductors, Galvanized Steel Reinforced (ACSR/GZ-1350)



## Properties:

Aluminium conductors manufactured to AS 3607

The centre wire or wires are of galvanized steel and the outer layer or layers are of aluminium

## Structural Parameters:

Code name	Structure		Overall diameter	Calculated area			Approx. mass of conductor	Rated strength, Min	DC resistance at 20°C	AC resistance at 50Hz, 75°C	Calculated elasticity modulus	Coefficient of linear expansion
	Al	ST		Al	ST	Total						
	No./mm	No./mm	mm	mm <sup>2</sup>	mm <sup>2</sup>	mm <sup>2</sup>	kg/km	kN	Ω/km	Ω/km	GPa	1/°C
Almond	6/2.50	1/2.50	7.5	29.45	4.91	34.36	119	10.5	0.975	1.1911	83	19.3E-06
Apricot	6/2.75	1/2.75	8.3	35.64	5.94	41.58	144	12.6	0.805	0.9834	83	19.3E-06
Apple	6/3.00	1/3.00	9.0	42.41	7.07	49.48	171	14.9	0.677	0.8271	83	19.3E-06
Banana	6/3.75	1/3.75	11.3	66.27	11.04	77.31	268	22.7	0.433	0.5290	83	19.3E-06
Cherry	6/4.75	7/1.60	14.3	106.32	14.07	120.4	402	33.3	0.271	0.3313	80	19.9E-06
Grape	30/2.50	7/2.50	17.5	147.26	34.36	181.6	677	63.5	0.196	0.2396	88	18.4E-06
Lemon	30/3.00	7/3.00	21.0	212.06	49.48	261.5	973	90.4	0.136	0.1664	88	18.4E-06
Lychee	30/3.25	7/3.25	22.8	248.87	58.07	306.9	1140	105	0.116	0.1420	88	18.4E-06
Lime	30/3.50	7/3.50	24.5	288.63	67.35	356	1320	122	0.1	0.1225	88	18.4E-06
Mango	54/3.00	7/3.00	27.0	381.70	49.48	431.2	1440	119	0.0758	0.0931	78	19.9E-06
Orange	54/3.25	7/3.25	29.3	447.97	58.07	506	1690	137	0.0646	0.0795	78	19.9E-06
Olive	54/3.50	7/3.50	31.5	519.54	67.35	586.9	1960	159	0.0557	0.0688	78	19.9E-06
Pawpaw	54/3.75	19/2.25	33.8	596.41	75.55	672	2240	178	0.0485	0.0601	77	20E-06
Quince	3/1.75	4/1.75	5.3	7.22	9.62	16.84	95	12.7	3.25	3.9703	136	13.9E-06
Raisin	3/2.50	4/2.50	7.5	14.73	19.64	34.36	195	24.4	1.95	2.3822	136	13.9E-06
Sultana	4/3.00	3/3.00	9.0	28.27	21.21	49.48	243	28.3	0.897	1.0958	119	15.2E-06
Walnut	4/3.75	3/3.75	11.3	44.18	33.13	77.31	380	43.8	0.573	0.7000	119	15.2E-06

## Current Ratings:

Code name	*Current carrying capacity, A							
	35°C ambient temperature				40°C ambient temperature			
	50°C operation temperature	60°C operation temperature	70°C operation temperature	75°C operation temperature	50°C operation temperature	60°C operation temperature	70°C operation temperature	75°C operation temperature
Almond	103	138	164	174	76	120	150	161
Apricot	116	156	185	197	86	136	169	183
Apple	128	173	206	220	95	151	188	203
Banana	169	230	274	292	122	199	250	270
Cherry	224	308	369	394	159	266	336	364
Grape	274	381	458	490	191	328	417	452
Lemon	341	479	577	618	233	411	525	570
Lychee	375	529	639	685	253	454	580	631
Lime	409	580	702	752	273	497	637	693
Mango	477	682	826	886	314	583	750	817
Orange	524	753	914	981	340	642	829	904
Olive	571	824	1003	1077	364	702	909	992
Pawpaw	618	897	1094	1176	389	763	991	1082
Quince	52	69	82	87	39	60	75	81
Raisin	73	97	116	123	54	85	106	114
Sultana	112	151	179	191	82	131	163	177
Walnut	147	200	238	254	106	173	217	235

\*Note: Current carrying capacity is based to the following conditions

- Frequency: 50Hz
- Solar absorption coefficient: 0.5
- Emissivity: 0.5
- Wind speed: 1.0m/s
- Solar radiation: 1000W/m<sup>2</sup>
- Current carrying capacity values calculated as per IEC 61597