Application

ACSR/GZ conductors find extensive applications in overhead transmission and distribution lines spanning various voltage levels. Renowned for their reliability and exceptional strength-to-weight ratio, ACSR/GZ conductors are deemed suitable for spanning practical distances between timber poles, transmission towers, and other supporting structures. Over the years, they have emerged as one of the most popular choices for electrical systems globally.

Advantages

ACSR/GZ conductors offer numerous benefits due to their simple design, cost-effectiveness, and robust performance. Featuring a straightforward structure, these conductors are easy to install and maintain, reducing operational costs and downtime. Their economical construction makes them a cost-effective solution for electrical transmission projects, while their ample transmission capacity efficiently meets the demands of modern electrical systems. ACSR/GZ conductors are also suitable for challenging terrains, ensuring reliable power transmission across rivers, valleys, and other difficult landscapes. Additionally, they exhibit excellent electrical conductivity and mechanical strength, ensuring consistent performance under diverse operating conditions, thanks to their high tensile strength and durability.

Construction

Aluminum conductors, galvanized zinc steel reinforced ACSR/GZ are meticulously crafted from multiple non-insulated single wires twisted together. At the core lies a steel core, which may be single or twisted, surrounded by aluminum wires twisted around it. The steel core's primary function is to enhance the conductor's strength, while the aluminum stranded wires efficiently convey electrical energy. This robust construction ensures that ACSR/GZ conductors deliver optimal performance and longevity in overhead transmission and distribution applications.

Specifications

-AS/NZS 3607 Australian Standard

Eastful Cable Lab

We have CNAS Accredited Facility to assure conformity assessment services with a focus on quality, expertise, and customer satisfaction.
CNAS has international mutual recognition among IAF, ILAC, APLAC and PAC.

Accreditation

We meet the requirements of ISO9001, ISO14001, ISO45001 and ISO50001 and our cables have certificate of CCC, RoHS, CASC, UL, cUL, TÜV Rhineland and CCS.

National Green Factory

Our facility has been awarded of National Green Factory by Ministry of Industry and Information Technology of China.
We are committed to the development of high-end, intelligent and green manufacturing industry.

*The overall energy consumption level of green factories is better than the energy efficiency benchmark level.

Technical Parameters

Code Name	Stranding and Wire Diameter		Nominal Overall Diameter	Nominal Cross Section Area	Nominal Weight	Breaking Load	Modulus of Elasticity	Coefficient of Linear Expansion	D.C. Resistance at 20°C	A.C. Resistance at 50Hz at 75°C	Inductive Reactance to 0.3m at 50Hz
	Alum.	Steel									
-	No./mm	No./mm	mm	mm^2	kg/km	kN	GPa	$\times10^{-6}$/°C	Ω/km	Ω/km	Ω/km
Almond	6/2.50	1/2.50	7.5	34.4	119	10.5	83	19.3	0.975	1.31	0.296
Apricot	6/2.75	1/2.75	8.3	41.6	144	12.6	83	19.3	0.805	1.08	0.290
Apple	6/3.00	1/3.00	9.0	49.5	171	14.9	83	19.3	0.677	0.910	0.285
Banana	6/3.75	1/3.75	11.3	77.3	268	22.7	83	19.3	0.433	0.582	0.271
Cherry	6/4.75	7/1.60	14.3	120	402	33.4	80	19.9	0.271	0.367	0.256
Grape	30/2.50	7/2.50	17.5	182	677	63.5	88	18.4	0.196	0.263	0.240
Lemon	30/3.00	7/3.00	21.0	262	973	90.4	88	18.4	0.136	0.167	0.228
Lychee	30/3.25	7/3.25	22.8	307	1140	105	88	18.4	0.116	0.142	0.223
Lime	30/3.50	7/3.50	24.5	356	1320	122	88	18.4	0.100	0.123	0.219
Mango	54/3.00	7/3.00	27.0	431	1440	119	78	19.9	0.0758	0.0955	0.212
Orange	54/3.25	7/3.25	29.3	506	1690	137	78	19.9	0.0646	0.0816	0.207
Olive	54/3.50	7/3.50	31.5	587	1960	159	78	19.9	0.0557	0.0705	0.202
Pawpaw	54/3.75	19/2.25	33.8	672	2240	178	77	20.0	0.0485	0.0615	0.198
Quince	3/1.75	4/1.75	5.3	16.8	95	12.7	136	13.9	3.25	4.37	0.346
Raisin	3/2.50	4/2.50	7.5	34.4	195	24.4	136	13.9	1.59	2.14	0.324
Sultana	4/3.00	3/3.00	9.0	49.5	243	28.3	119	15.2	0.897	1.21	0.302
Walnut	4/3.75	3/3.75	11.3	77.3	380	43.9	119	15.2	0.573	0.770	0.288

Technical Parameters

Code Name	Continuous Current Carrying Capacity											
	Rural Weather						Industrial Weather					
	at night in winter			at noon in summer			at night in winter			at noon in summer		
	still air	1m/s wind	2m/s wind	still air	1m/s wind	2m/s wind	still air	1m/s wind	2m/s wind	still air	1m/s wind	2m/s wind
-	A	A	A	A	A	A	A	A	A	A	A	A
Almond	108	186	216	84	167	198	116	190	220	79	164	196
Apricot	123	209	244	95	188	223	131	215	248	89	184	220
Apple	138	233	272	107	209	248	148	240	277	98	205	244
Banana	187	309	359	141	274	326	201	318	367	129	268	321
Cherry	259	416	483	191	364	434	280	430	495	171	354	426
Grape	330	513	598	238	449	531	361	532	614	211	436	520
Lemon	441	680	787	307	586	698	482	707	811	269	567	682
Lychee	493	752	879	341	645	769	540	783	906	298	623	751
Lime	548	826	976	377	706	843	601	862	1007	328	681	823
Mango	648	960	1147	443	816	991	711	1003	1183	383	786	966
Orange	724	1061	1282	492	898	1106	796	1110	1323	424	863	1078
Olive	804	1165	1421	543	981	1225	884	1220	1466	466	941	1194
Pawpaw	885	1270	1563	595	1065	1347	974	1333	1614	508	1020	1312
Quince	53	93	108	42	85	100	56	95	110	40	83	99
Raisin	85	145	169	66	131	155	91	149	172	61	129	153
Sultana	120	203	236	91	181	215	129	208	241	84	178	212
Walnut	161	269	312	121	238	283	175	277	319	111	233	279

Note:
Current ratings are based on the following conditions:
-Conductor temperature rise above ambient of 40°C
-Ambient air temp. of 35°C for summer noon or 10°C for winter night
-Direct solar radiation intensity of 1000 W/m2 for summer noon or zero for winter night
-Diffuse solar radiation intensity of 100 W/m2 for summer noon or zero for winter night
-Ground reflectance of 0.2
-Emissivity of 0.5 for rural weathered conductor or 0.85 for industrial weathered conductor
-Solar absorption coefficient of 0.5 for rural weathered conductor or 0.85 for industrial weathered conductor.