



• Application

Copper-clad steel wire finds versatile applications within power transmission and distribution networks. Serving as an overhead ground wire, it guarantees the safety and stability of the electrical infrastructure by efficiently conducting electrical charges to the ground. Additionally, it functions as a messenger wire, offering support for communication cables and other auxiliary components along power lines. Within substations and electrical facilities, copper-clad steel wire integrates seamlessly into ground grid systems, aiding in the dissipation of fault currents and contributing to the safe operation of electrical equipment.

• Advantage

Copper-clad steel wire combines excellent electrical conductivity with robust mechanical strength, thanks to its steel core and copper cladding. This cladding also provides corrosion resistance, ensuring durability in outdoor environments. During installation, the wire remains resilient to damage, maintaining its integrity under various mechanical stresses. Its resistance to corrosion and mechanical damage contributes to a prolonged service life, reducing the frequency of replacements and maintenance.

• Construction

The construction of soft-annealed copper-clad steel (CCS) conductors involves a concentric-lay stranded design. These CCS strands incorporate a low-carbon steel core with a 40% conductivity grade material, providing improved flexibility for easier handling during installation.

• Specification

- ASTM B193 Standard Test Method for Resistivity of Electrical Conductor Materials
- ASTM B227 Standard Specification for Hard-drawn Copper Clad Steel Wire
- ASTM B228 Standard Specification for Concentric-lay-stranded Copper Clad Steel Conductors
- ASTM B258 Standard Specification for Standard Nominal Diameters and Cross-sectional Areas of AWG Sizes of Solid Round
- ASTM B910 Standard Specification for Annealed Copper Clad Steel Wire

• 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

Size	Nominal Cross Section Area		No. of Single Wires	Dia. of Single Wires	Nominal Overall Dia.	Weight per 1000ft	Min. Breaking Strength	Max. D.C. Resistance at 20°C	Coeff. of Linear Expansion
-	inch ²	mm ²	-	inch	inch	lb	lb	Ω/1000ft	×10 ⁻⁶ /°C
7*#9	0.07195	46.42	7	0.1144	0.343	0.259	2650	0.2916	
7*#8	0.09078	58.57	7	0.1285	0.385	0.327	3350	0.2311	
7*#7	0.1145	73.86	7	0.1443	0.433	0.413	4220	0.1833	
7*#6	0.1443	93.09	7	0.162	0.486	0.52	5320	0.1454	
7*#5	0.1819	117.4	7	0.1819	0.546	0.656	6710	0.1153	
19*#9	0.1953	126	19	0.1144	0.572	0.707	6820	0.1079	
19*#8	0.2464	159	19	0.1285	0.642	0.892	8610	0.0855	
19*#7	0.3107	200.5	19	0.1443	0.721	1.125	10850	0.0678	
19*#6	0.3916	252.7	19	0.162	0.81	1.418	13680	0.0527	
19*#5	0.4938	318.5	19	0.1819	0.91	1.787	17250	0.0418	

No./Dia. of Wires	Approx. Overall Dia.	Approx. Weight	Minimum Break Load of Strands						
			Grade 350	Grade 480	Grade 700	Grade 850	Grade 1000	Grade 1150	Grade 1300
No./mm	mm	kg/km	kN	kN	kN	kN	kN	kN	kN
3/1.80	3.9	60	2.65	3.66	—	—	—	—	—
7/2.00	6.0	170	7.70	10.55	15.40	—	22.00	25.30	28.60
7/2.36	7.1	240	10.70	14.70	21.40	—	30.60	35.20	39.80
7/2.65	8.0	300	13.50	18.50	27.00	—	38.60	44.40	50.20
7/3.00	9.0	392	17.3	23.75	34.65	—	49.50	56.90	64.30
7/3.15	9.5	430	19.10	26.20	38.20	—	54.55	62.75	70.90
7/3.25	9.8	460	20.30	27.85	40.65	—	58.05	66.80	75.50
7/3.65	11.0	570	25.60	35.15	51.25	—	73.25	84.20	95.20
7/4.00	12.0	690	30.90	42.20	61.60	—	88.00	101.0	114.00
7/4.25	12.8	780	34.75	47.65	69.50	—	99.30	114.0	129.00
7/4.75	14.0	970	43.40	59.45	86.80	—	124.0	142.7	161.3
19/1.00	5.0	120	5.22	7.16	10.45	—	14.92	17.16	19.40
19/1.25	6.3	180	8.16	11.19	16.32	—	23.32	26.81	30.31
19/1.40	7.0	230	10.24	14.04	20.47	—	29.25	33.64	38.02
19/1.60	8.0	300	13.37	18.35	26.75	—	38.20	43.93	49.66
19/2.00	10.0	470	20.90	28.65	41.78	50.74	53.69	68.64	77.60
19/2.50	12.5	730	32.65	44.80	65.29	79.28	93.27	107.3	121.3
19/3.00	15.0	1050	47.00	64.50	94.00	114.1	134.3	154.5	174.6
19/3.55	17.8	1470	65.80	90.27	131.6	159.9	188.0	216.3	244.5
19/4.00	20.0	1870	83.55	114.6	167.1	203.0	238.7	274.6	310.4
19/4.75	23.8	2630	117.85	161.6	235.7	286.0	336.7	387.2	437.7