

Application

Messenger Wire, Overhead Ground or Static Wire, Guy Wire

Galvanized steel strand wire can be used as ground wire of overhead line, but also can be used as structural cable, supporting cable, cable, block cable and cable reinforcement core. It is made of wire twisted together. There are mainly ASTM standards, BS standards, IEC standards and other production standards. It is widely used in energy, construction, bridge, water conservancy and geotechnical engineering.

Standard

ASTM A-475 , CSA G12-92 , BS183

Construction

Concentrically stranded

Common, High Strength and Extra High Strength

Data Sheet

GSW Cable-Galvanized Steel Wire Cable – Standard ASTM A475

No. of Wires	Dia. of Wires	Approx. Strand Dia.	Approx. Strand Dia.	Siemem Martin Grade	High Strength	Extra-high Strength	Approx. Weight
No.	Dia.	Inch	mm	KN	KN	KN	kg/km
3	2.64	7/32	5.56	10.409	15.569	21.796	131
3	3.05	1/4	6.35	13.523	21.04	29.981	174
3	3.05	1/4	6.35	—	—	—	174
3	3.3	9/32	7.14	15.035	23.398	33.362	204
3	3.68	5/16	7.94	18.193	28.246	40.479	256
3	4.19	3/8	9.52	24.732	37.187	52.489	328
7	1.04	1/8	3.18	4.048	5.916	8.14	49
7	1.32	5/32	3.97	6.539	9.519	13.078	76
7	1.57	3/16	4.76	8.452	12.677	17.748	108
7	1.65	3/16	4.76	—	—	—	118
7	1.83	3/16	5.56	11.387	17.126	24.02	145
7	2.03	7/32	6.35	14.012	21.129	29.581	181
7	2.36	1/4	7.14	18.905	28.469	39.812	243
7	2.64	9/32	7.94	23.798	35.586	49.82	305
7	2.77	5/16	7.94	—	—	—	335
7	3.05	3/8	9.52	30.915	48.04	68.503	407
7	3.68	7/16	11.11	41.591	64.499	92.523	594
7	4.19	1/2	12.7	53.823	83.627	119.657	768
7	4.78	9/16	14.29	69.837	108.981	155.688	991
7	5.26	5/8	15.88	84.961	131.667	188.605	1211
19	2.54	1/2	12.7	56.492	84.961	118.768	751
19	2.87	9/16	12.49	71.616	107.202	149.905	948
19	3.18	5/8	15.88	80.513	124.995	178.819	1184
19	3.81	3/4	19.05	116.543	181.487	259.331	1719
19	4.5	7/8	22.22	159.691	248.211	354.523	2352
19	5.08	1	25.4	209.066	325.61	464.839	2384
37	3.63	1	25.4	205.508	319.827	456.832	3061
37	4.09	11/8	28.58	262	407.457	581.827	4006
37	4.55	11/4	31.75	324.72	505.318	721.502	4833

STAY WIRE-CSA G12-92

Code	Nominal diameter	strand	Nominal diameter	wire	Nominal area	cross-section	No. of wires	Minimum breaking load,				Approx. weight
								KN				
size	in	mm	mm		mm ²		wires	800	1100	1300	1500	kg/km
3/16	4.95		1.65		14.97		7	10.67	15.56	17.78	21.34	117
1/4	6.32		2.11		24.48		7	17.34	25.34	28.45	35.12	191
9/32	7.24		2.41		31.93		7	23.12	33.34	37.78	45.79	249
5/16	8.31		2.77		42.18		7	30.23	44.01	49.34	60.46	329
3/8	9.14		3.05		51.14		7	36.45	53.34	60.01	73.35	399
7/16	10.97		3.66		73.65		7	52.9	76.9	86.68	105.8	574
1/2	12.57		4.19		96.52		7	69.35	100.91	113.35	138.69	753
9/16	14.33		4.78		125.62		7	90.24	131.14	147.58	180.48	980
9/16	14.45		2.89		124.64		19	84.02	122.25	137.36	168.03	972
5/8	15.77		5.26		152.11		7	109.35	159.14	178.7	218.71	1186
5/8	16.1		3.22		154.72		19	102.24	149.36	167.59	204.93	1207
11/16	17.48		3.45		177.62		19	122.25	177.81	200.04	244.49	1385
3/4	19.35		3.87		223.49		19	148.92	216.49	243.6	297.83	1743
13/16	20.7		4.14		255.77		19	172.03	248.94	280.5	342.73	1995
7/8	22.71		4.54		307.58		19	205.37	299.17	336.51	411.19	2399
15/16	23.88		4.77		339.53		19	228.49	332.06	373.85	456.97	2648
1	25.6		5.12		391.19		19	262.72	381.85	429.86	524.99	3051

STAY WIRE-ASTM A475

Nominal Dia. of strand	Number of wires in Strand	Nominal Dia. of coated wires	of strand	Approx. Weight	Min. Breaking Strength,										
					Utilites Grad A		Common Grade		Siemens-Martin Grade		High-Strength Grade		Extra High-Strength Grade		
in.	mm	in.	mm	lb/1000ft	kg/km	lbf	KN	lbf	KN	lbf	KN	lbf	KN	lbf	KN
1/8	3.18	7	0.041	1.04	32	48	...	540	2.402	910	4.048	1330	5.916	1830	8.14
5/32	3.97	7	0.052	1.32	51	76	...	870	3.87	1470	6.539	2140	9.519	2940	13.078
3/16	4.76	7	0.062	1.57	73	109	...	1150	5.115	1900	8.452	2850	12.677	3990	17.748
3/16	4.76	7	0.065	1.65	80	119	2400	10.676	...	...	...	...	...	...	...
7/32	5.56	3	0.104	2.64	88	131	...	1400	6.228	2340	10.409	3500	15.569	4900	21.796
7/32	5.56	7	0.072	1.83	98	146	...	1540	6.85	2560	11.387	3850	17.126	5400	24.02
1/4	6.35	3	0.12	3.05	117	174	3150	14.012	1860	8.274	3040	13.523	4730	21.04	6740
1/4	6.35	3	0.12	3.05	117	174	4500	20.017	...	...	...	...	...	...	...
1/4	6.35	7	0.08	2.03	121	180	...	1900	8.452	3150	14.012	4750	21.129	6650	29.581
9/32	7.14	3	0.13	3.3	137	204	...	2080	9.252	3380	15.035	5260	23.398	7500	33.362
9/32	7.14	7	0.093	2.36	164	244	4600	20.462	2570	11.432	4250	18.905	6400	28.469	8950
5/16	7.94	3	0.145	3.68	171	255	6500	28.913	2490	11.076	4090	18.193	6350	28.246	9100
5/16	7.94	7	0.104	2.64	205	305	...	3200	14.234	5350	23.798	8000	35.586	11200	49.82

5/16	7.94	7	0.1092	77225	335	6000	26.689	...	...	...	...	...	...	...
3/8	9.52	3	0.1654	19220	328	8500	37.81	3330	14.813	5560	24.732	8360	37.187	11800	52.489
3/8	9.52	7	0.12	3.05273	407	11500	51.155	4250	18.905	6950	30.915	10800	48.04	15400	68.503
7/16	11.11	7	0.1453	68399	595	18000	80.068	5700	25.355	9350	41.591	14500	64.499	20800	92.523
1/2	12.7	7	0.1654	19517	770	25000	111.206	7400	32.917	12100	53.823	18800	83.627	26900	119.657
1/2	12.7	19	0.1	2.54504	751	...	7620	33.895	12700	56.492	19100	84.961	26700	118.768	...
9/16	14.29	7	0.1884	78671	1000	...	9600	42.703	15700	69.837	24500	108.981	35000	155.688	...
9/16	14.29	19	0.1132	87637	949	...	9640	42.881	16100	71.616	24100	107.202	33700	149.905	...
5/8	15.88	7	0.2075	26813	1211	...	11600	51.599	19100	84.961	29600	131.667	42400	188.605	...
5/8	15.88	19	0.1253	18796	1186	...	11000	48.93	18100	80.513	28100	124.995	40200	178.819	...
3/4	19.05	19	0.15	3.811155	1721	...	16000	71.172	26200	116.543	40800	181.487	58300	259.311	...
7/8	22.22	19	0.1774	4.51581	2356	...	21900	97.416	35900	159.691	55800	248.211	79700	354.523	...

STAY WIRE-BS183

Stranding	wire no./Dia.	Approx. Strand Dia.	Weight	Min. Breaking load of strand		
				Grade 1000	Grade 1150	Grade 1300
		mm	kg/km	KN	KN	KN
3/1.80		3.9	60	7.63	8.78	9.92
3/2.65		5.7	129	16.55	19.03	21.51
3/3.25		7	194	24.89	28.62	32.35
3/4.00		8.6	294	37.7	43.35	49.01
4/1.80		4.3	79	10.18	11.71	13.23
4/2.65		6.4	172	22.06	25.37	28.68
4/3.25		7.8	259	33.18	38.16	43.14
4/4.00		9.7	392	50.27	57.81	65.35
5/1.50		4.1	69	8.84	10.16	11.49
5/1.80		4.9	99	12.72	14.63	16.54
5/2.65		7.2	215	27.58	31.71	35.85
5/3.25		8.8	324	41.48	47.7	53.92
5/4.00		10.8	490	62.83	72.26	81.68
7/1.60		4.8	110	14.07	16.19	18.3
7/1.80		5.4	139	17.81	20.48	23.16
7/2.00		6	172	21.99	25.29	28.59
7/2.36		7.1	239	30.62	35.21	39.81
7/2.65		8	301	38.61	44.4	50.19
7/3.00		9	386	49.48	56.9	64.32
7/3.15		9.5	426	54.55	62.73	70.92
7/3.25		9.8	453	58.07	66.78	75.49
7/3.65		11	571	73.24	84.23	95.22
7/4.00		12	686	87.96	101.16	114.35
7/4.25		12.8	775	99.3	114.2	129.1
7/4.75		14.3	968	124.04	142.65	161.26
19/1.60		8	298	38.2	43.93	49.66
19/2.00		10	466	59.69	68.64	77.6

19/2.50	12.5	727	93.27	107.26	121.25
19/3.00	15	1048	134.3	154.45	174.59
19/3.55	17.8	1467	188.06	216.27	244.48
19/4.00	20	1862	238.76	274.58	310.39