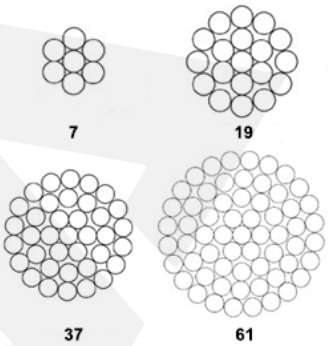
DEMKA
single source for all electrical needs

ACS CONDUCTOR



GENERAL INFORMATION

ACS cable with full name as Aluminium Clad Steel Wire Stranded conductor is a composite Concentric-lay-stranded conductors made of aluminium-clad steel wires.
The wires of the conductive layers could be made of hard-drawn aluminium or of thermal aluminium alloy and they have a rounded section.

*** Sections of Related Standard is down below;**

APPLICATION

Due to its excellent characteristics, this product is used extensively in the cable industry for the manufacturing of Optical Ground Wire (OPGW), conventional stranded earth wired and steel-reinforced cores for phases conductors, all to be used in overheads lines. Also, it can be used in alternative applications as helical hardware for overhead lines or those where corrosion resistance is an important factor.

According to ASTM B 416

Size AWG	DIAMETER		STRANDED DIAMETER		BREAKING LOAD		WEIGHT		RESISTANCE at 20°C		CROSS SECTION		
	in.	mm	in.	mm	lb.	kg	lb./1,000 ft.	kg/ lkm	O / 1,000 ft.	O / km	Cmils	in2	mm'
37/5	0.1819	4.620	1.27	32.36	142.800	64.770	2.802	4.170	0.04247	0.1394	1.225.000	0.9619	620.6
37/6	0.1620	4.115	1.13	28.70	120.200	54.520	2.222	3.307	0.05356	0.1758	971.300	0.7629	492.2
37/7	0.1443	3.665	1.01	25.65	100.700	45.670	1.762	2.622	0.06754	0.2216	770.300	0.6050	390.3
37/8	0.1285	3.264	0.899	22.83	84.200	37.190	1.398	2.080	0.08516	0.2794	610.900	0.4798	309.5
37/9	0.1144	2.906	0.801	20.35	66.770	30.250	1.108	1.649	0.1074	0.3524	484.400	0.3805	245.5
37/10	0.1019	2.588	0.713	18.11	52.950	24.010	879.0	1.308	0.1354	0.443	384.200	0.3017	194.6
19/5	0.1819	4.620	0.910	23.11	73.350	33.270	1.430	2.128	0.08224	0.2699	628.900	0.4940	318.7
19/6	0.1620	4.115	0.810	20.57	61.700	27.980	1.134	1.688	0.137	0.3403	498.800	0.3719	252.7
19/7	0.1443	3.665	0.721	18.31	51.730	23.460	899.5	1.339	0.1308	0.4292	385.500	0.3107	200.4
19/8	0.1285	3.264	0.642	16.31	43.240	19.610	713.5	1.062	0.1649	0.5411	313 .700	0.2464	159.0
19/9	0.1144	2.906	0.572	14.53	34.290	15.550	565.8	842.0	0.2079	0.6821	248.800	0.1954	126.1
19/10	0.1019	2.588	0.509	12.93	27.190	12.330	448.7	667.8	0.2622	0.8603	197.300	0.1549	99.93
7/5	0.1819	4.620	0.546	13.87	27.030	12.260	524.9	781.2	0.2264	0.7428	231.700	0.1820	117.4
7/6	0.1620	4.115	0.486	12.34	22.730	10.310	416 .3	619.5	0.2803	0.9197	183.800	0.1443	93.09
7/7	0.1443	3.665	0.433	11.00	19.060	8.645	330.0	491.1	0.3535	1.1598	145.700	0.1145	73.87
7/8	0.1285	3.264	0.385	9.779	15.930	7.225	261.8	389.6	0.4458	1.4627	115.600	0.09077	58.56
7/9	0.1144	2.906	0.343	8.712	12.630	5.728	207.6	308.9	0.5621	1.8442	91.650	0.07198	46.44
7/10	0.1019	2.588	0.306	7.772	10.020	4.544	164.7	245.1	0.7088	2.3255	72.680	0.05708	36.82
7/ 11	0.0907	2.304	0.272	6.909	7.945	3.603	130.6	194.4	0.8938	2.9325	57.590	0.04523	29.18
3/5	0.1819	4.620	0.392	9.957	12.230	5.547	224.5	334.1	0.5177	1.6985	99.310	0.07800	50.32
3/6	0.1620	4.115	0.349	8.864	10.280	4.662	178.1	265.0	0.6528	2.1418	78.750	0.06185	39.90
3/7	0.1443	3.665	0.311	7.899	8.624	3.910	141.2	210.7	0.8232	2.1009	62.450	0.04905	31.64
3/8	0.1285	3.264	0.277	7.036	7.206	3.268	112.0	166.7	1.038	3.4057	49.530	0.03890	25.10
3/9	0.1144	2.906	0.247	6.274	5.715	2.592	88.81	132 .2	1.309	4.2947	38.280	0.03085	19.90
3/10	0.1019	2.588	0.220	5.588	4.532	2.055	70.43	104.8	1.651	5.4168	31.150	0.2446	15.78

According to IEC 61232, ACS 20 SA

NOMINAL SECTION	CONSTRUCTION	CROSS SECTION AREA (mm²)			DIAMETER	DC RESISTANCE	RTS	WEIGHT
mm²	No./Dia n/mm	Al.	Steel	Total	mm	Ω/km	Kn	kg/km
25	3/3. 25	6.22	18.67	24.89	7.00	3.435	33.35	165.3
35	3/ 3.85	8.73	26.19	34.92	8.30	2.448	43.65	232.0
50	3/4.60	12.46	37.40	49.86	9.91	1.714	56.84	331.2
16	7/1.70	3.97	11.92	15.89	5.10	5.391	21.29	105.8
25	7/2.15	6.35	19.06	25.41	6.45	3.370	34.05	169.1
30	7/2.30	7.27	21.81	29.08	6.90	2.945	38.97	193.6
35	7/ 2.50	8.59	25.77	34.36	7.50	2.493	46.04	228.7
40	7/ 2.75	10.40	31.18	41.58	8.25	2.060	57.72	276.7
50	7/3.00	12.57	37.11	49.48	9.00	1.731	66.30	329.3
55	7/3.20	14.08	42.22	56.30	9.60	1.521	75.44	374.7
65	7/3.50	16.84	50.51	67.35	10.50	1.272	85.53	448.3
70	7/3.60	17.81	53.44	71.25	10.80	1.202	90.48	474.2
80	7/3.80	19.85	59.54	79.39	11.40	1.079	99.23	528.4
95	7/4.16	23.79	71.35	95.14	12.48	0.900	112.26	633.3
80	19/ 2.32	20.08	60.24	80.32	11 .60	1.071	107.62	536.7
100	19/2.60	25.22	75.66	100.88	13.00	0.852	135.18	674.1
120	19/2.85	30.30	90.91	121.21	14.25	0.709	162.42	809.9
150	19/3.15	37.02	111.05	148.07	15.75	0,582	198.41	989.4
185	19/3.50	45.70	137.10	182 .80	17.50	0.470	232.15	1221.5
210	19/3.75	52.46	157.39	209.85	18.75	0.410	262.31	1402 .3
240	19 / 4.00	59 .69	179.07	238.76	20.00	0.360	288.89	1595.5

According to DIN 48201 / 8 ACS 20 SA

CODE	SECTION	No. Of WIRE	DIAMETER (mm)		UNIT WEIGHT	RATED STRENGHT	RESISTANCE
	mm²	7	WIRE	CONDUCTOR	Kg/Km	Kn	Ω/km
25	24,25	7	2,10	6,30	162,0	31,56	3,5460
35	34,36	7	2,50	7,50	229,0	44,72	2,4990
50	49,48	7	3,00	9,00	330,0	64,40	1,7360
70	65,81	19	2,10	10,5	441,0	85,65	1,3130
956	93,27	19	2,50	12,5	626,0	121 ,39	0,9250
120	116,99	19	2,80	14,0	785,0	152,26	0,7370
150	147,11	37	2,25	15 ,7	990,0	191,46	0,5870
185	181,62	37	2,50	17,5	1221,0	236,38	0,4760
240	252,54	61	2,25	20,2	1635 ,0	299,05	0,3570
300	299,43	61	2,50	22,5	2017,0	369,20	0,2890