

# Conductor Alloys



## PERCON® HC-95

**PERCON HC-95®** is engineered to have high electrical conductivity, 73% IACS. With the same CDA alloy chemistry, **HC-95®** is a drop-in replacement for alloys **HS-95®** or **CS-95®** having the same conductor break strength, elongation and flex life.

**PERCON HC-95®** is a very high strength alloy conductor.

**PERCON HC-95®** provides a higher electrical conductivity than **HS-95®** or **CS-95®**.

**PERCON HC-95®** has excellent resistance to corrosive environments.

**PERCON HC-95®** is available bare or plated with silver or nickel.

	SOFT TEMPER	HARD DRAWN
Tensile	95,000 psi (655 MPa)	130,000 psi (896 MPa)
Elongation	6%	1%
Electrical Conductivity	73% IACS	40% IACS
Electrical Resistivity	14.21 Ω-cmil/ft (2.36 μΩ-cm)	25.93 Ω-cmil/ft (4.31 μΩ-cm)
Density	0.317 lbs/in <sup>3</sup> (8.77 g/cm <sup>3</sup> )	0.317 lbs/in <sup>3</sup> (8.77 g/cm <sup>3</sup> )
Thermal Coefficient of Resistance	0.00198 /°C	0.00198 /°C

### Single End – Silver Plated **PERCON HC-95®** – Soft Temper

AWG	Diameter					Resistance max		Weight max		Break Strength min	
	nom	inches min	max	mm min	Max	Ω/mft	Ω/km	lb/mft	kg/km	lb	N
30	0.0100	0.0099	0.0101	0.251	0.257	145.0	475.6	0.306	0.455	7.31	32.5
31	0.0089	0.0088	0.0090	0.224	0.229	183.5	601.9	0.243	0.362	5.78	25.7
32	0.0080	0.0079	0.0081	0.201	0.206	227.6	746.8	0.197	0.293	4.66	20.7
33	0.0071	0.0070	0.0072	0.178	0.183	289.9	951.2	0.156	0.232	3.66	16.3
34	0.0063	0.0062	0.0064	0.157	0.163	369.6	1,213	0.123	0.183	2.87	12.76
35	0.0056	0.0055	0.0057	0.140	0.145	469.6	1,541	0.0978	0.146	2.26	10.04
36	0.0050	0.0049	0.0051	0.124	0.130	591.7	1,941	0.0783	0.117	1.79	7.97
37	0.0045	0.0044	0.0046	0.112	0.117	733.8	2,408	0.0638	0.0950	1.44	6.43
38	0.0040	0.0039	0.0041	0.099	0.104	934.0	3,064	0.0507	0.0755	1.13	5.05
39	0.0035	0.0034	0.0036	0.086	0.091	1,229	4,032	0.0392	0.0583	0.863	3.84
40	0.0031	0.0030	0.0032	0.076	0.081	1,579	5,179	0.0310	0.0461	0.672	2.99
41	0.0028	0.0027	0.0029	0.069	0.074	1,949	6,394	0.0255	0.0380	0.544	2.42
42	0.0025	0.0024	0.0026	0.061	0.066	2,466	8,092	0.0205	0.0305	0.430	1.91
43	0.0022	0.0021	0.0023	0.053	0.058	3,222	10,569	0.0161	0.0240	0.329	1.46
44	0.0020	0.0019	0.0021	0.048	0.053	3,935	12,911	0.0134	0.0200	0.269	1.20
45	0.00176	0.00166	0.00186	0.042	0.047	5,156	16,915	0.0106	0.0158	0.206	0.915
46	0.00157	0.00147	0.00167	0.037	0.042	6,575	21,570	0.0086	0.0128	0.161	0.717
47*	0.00140	0.00130	0.00150	0.033	0.038	15,342	50,334	0.0069	0.0103	0.173	0.768
48*	0.00124	0.00114	0.00134	0.029	0.034	19,950	65,454	0.0055	0.0082	0.133	0.590
49*•	0.00111	0.00101	0.00121	0.026	0.031	25,417	83,388	0.0045	0.0067	0.104	0.463
50*•	0.00099	0.00089	0.00109	0.023	0.028	32,733	107,390	0.0037	0.0054	0.081	0.360
51*•	0.00088	0.00081	0.00096	0.020	0.024	39,518	129,651	0.0028	0.0042	0.067	0.298
52*•	0.00078	0.00071	0.00086	0.018	0.022	51,433	168,744	0.0023	0.0034	0.051	0.229
53*•	0.00070	0.00065	0.00075	0.017	0.019	61,367	201,335	0.0017	0.0026	0.043	0.192
54*•	0.00062	0.00057	0.00067	0.014	0.017	79,801	261,816	0.0014	0.0021	0.033	0.148

\* These single end sizes will be hard temper. • These single end sizes will have 15% silver plate.

**PERCON®** is a registered trademark of Fisk Alloy Wire, Inc.

**CS-95®** is a registered trademark of International Wire Group.

CDA is the alloy designation of the Copper Development Association.

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Fisk Alloy Conductors Inc. • P.O.Box 26 • 10 Thomas Road • Hawthorne, NJ 07507 • U.S.A.

Phone (973) 427-7550 • Fax (973) 427-4585 • E-mail: sales@fiskaloy.com

**7-Strand Constructions – Silver Plated PERCON HC-95® - Soft Temper**

AWG	Construction	Diameter				Resistance max		Weight max		Break Strength min	
		inch		mm		Ω/mft	Ω/km	lb/mft	kg/km	Lb	N
		min	max	min	Max						
22	7/30	0.0297	0.0303	0.754	0.770	21.0	68.8	2.17	3.23	51.2	228
24	7/32	0.0237	0.0243	0.602	0.617	32.9	108	1.40	2.08	32.6	145
26	7/34	0.0186	0.0192	0.472	0.488	53.5	175	0.873	1.30	20.1	89.3
28	7/36	0.0147	0.0153	0.373	0.389	85.6	281	0.555	0.827	12.5	55.8
30	7/38	0.0117	0.0123	0.297	0.312	135	443	0.360	0.535	7.94	35.3
32	7/40	0.0090	0.0096	0.229	0.244	228	749	0.220	0.327	4.70	20.9
34	7/42	0.0072	0.0078	0.183	0.198	357	1,171	0.145	0.216	3.01	13.4
36	7/44	0.0057	0.0063	0.145	0.160	570	1,868	0.0953	0.142	1.89	8.39
38	7/46	0.0044	0.0050	0.112	0.127	951	3,121	0.0608	0.0905	1.13	5.02
40	7/48	0.0034	0.0040	0.087	0.102	1,582	5,190	0.0392	0.0583	0.679	3.02
42*	7/50	0.0027	0.0033	0.068	0.083	2,596	8,515	0.0259	0.0386	0.414	1.84
44*	7/52	0.0022	0.0025	0.056	0.063	3,858	12,657	0.0149	0.0221	0.278	1.24
46*	7/54	0.0017	0.0020	0.043	0.051	6,328	20,761	0.0097	0.0144	0.170	.755

\* These constructions will have 15% silver plate.

**19-Strand Unilay Constructions – Silver Plated PERCON HC-95® – Soft Temper**

AWG	Construction	Diameter				Resistance max		Weight max		Break Strength min	
		inch		mm		Ω/mft	Ω/km	lb/mft	kg/km	lb	N
		min	max	Min	Max						
18	19/30	0.0467	0.0476	1.186	1.210	7.98	26.2	5.72	8.52	139	618
20	19/32	0.0373	0.0382	0.947	0.971	12.5	41.1	3.69	5.48	88.5	394
22	19/34	0.0293	0.0302	0.743	0.767	20.4	66.8	2.30	3.43	54.5	242
24	19/36	0.0231	0.0241	0.587	0.611	32.6	107	1.47	2.18	34.0	151
26	19/38	0.0184	0.0193	0.467	0.491	51.4	169	0.949	1.41	21.6	95.9
28	19/40	0.0142	0.0151	0.359	0.383	86.9	285	0.579	0.862	12.8	56.8
30	19/42	0.0113	0.0123	0.288	0.312	136	446	0.384	0.571	8.17	36.3
32*	19/44	0.0095	0.0105	0.241	0.267	211	693	0.260	0.388	5.12	22.8
34*	19/46	0.0074	0.0084	0.187	0.212	353	1,158	0.166	0.247	3.06	13.6
36*	19/48	0.0057	0.0067	0.145	0.170	587	1,925	0.107	0.159	1.84	8.20

\* True Concentric construction.



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