

# Conductor Alloys



## PERCON® 15

PERCON® 15 is an economical alloy conductor providing high strength and high electrical conductivity.

PERCON® 15 provides high flex life.

PERCON® 15 has excellent resistance to corrosive environments.

PERCON® 15 is environmentally friendly and meets the RoHS requirements.

PERCON® 15 is available bare or plated with tin, silver or nickel.

	SOFT TEMPER	HARD DRAWN
Tensile	45,000 psi (310 MPa)	95,000 psi (655 MPa)
Elongation	6%	1%
Electrical Conductivity	75% IACS	70% IACS
Electrical Resistivity	13.83 Ω-cmil/ft (2.30 μΩ-cm)	14.82 Ω-cmil/ft (2.46 μΩ-cm)
Density	0.321 lbs/in <sup>3</sup> (8.89 g/cm <sup>3</sup> )	0.321 lbs/In <sup>3</sup> (8.89 g/cm <sup>3</sup> )
Thermal Coefficient of Resistance	0.003 /°C	0.003 /°C

### Single End – PERCON 15 – Hard Temper

AWG	Diameter					Resistance		Weight		Break Strength	
	nom	inches min	max	mm		max		max		min	
				min	Max	Ω/mft	Ω/km	lb/mft	kg/km	lb	N
30	0.0100	0.0099	0.0101	0.251	0.257	151	496	0.309	0.459	7.31	32.5
31	0.0089	0.0088	0.0090	0.224	0.229	191	628	0.245	0.365	5.78	25.7
32	0.0080	0.0079	0.0081	0.201	0.206	237	779	0.198	0.295	4.66	20.7
33	0.0071	0.0070	0.0072	0.178	0.183	302	992	0.157	0.233	3.66	16.3
34	0.0063	0.0062	0.0064	0.157	0.163	385	1,265	0.124	0.184	2.87	12.8
35	0.0056	0.0055	0.0057	0.140	0.145	490	1,607	0.0983	0.146	2.26	10.0
36	0.0050	0.0049	0.0051	0.124	0.130	617	2,024	0.0787	0.117	1.79	7.97
37	0.0045	0.0044	0.0046	0.112	0.117	765	2,511	0.0640	0.0953	1.44	6.43
38	0.0040	0.0039	0.0041	0.099	0.104	974	3,196	0.0509	0.0757	1.13	5.05
39	0.0035	0.0034	0.0036	0.086	0.091	1,282	4,205	0.0392	0.0584	0.863	3.84
40	0.0031	0.0030	0.0032	0.076	0.081	1,646	5,401	0.0310	0.0461	0.672	2.99
41	0.0028	0.0027	0.0029	0.069	0.074	2,032	6,668	0.0254	0.0379	0.544	2.42
42	0.0025	0.0024	0.0026	0.061	0.066	2,572	8,439	0.0205	0.0304	0.430	1.91
43	0.0022	0.0021	0.0023	0.053	0.058	3,360	11,022	0.0160	0.0238	0.329	1.46
44	0.0020	0.0019	0.0021	0.048	0.053	4,104	13,465	0.0133	0.0199	0.269	1.20
45	0.00176	0.00166	0.00186	0.042	0.047	5,377	17,640	0.0105	0.0156	0.206	0.91
46	0.00157	0.00147	0.00167	0.037	0.042	6,856	22,494	0.00844	0.0126	0.161	0.717
47	0.00140	0.00130	0.00150	0.033	0.038	8,767	28,762	0.00681	0.0101	0.126	0.561
48	0.00124	0.00114	0.00134	0.029	0.034	11,400	37,402	0.00543	0.00808	0.097	0.431
49	0.00111	0.00101	0.00121	0.026	0.031	14,524	47,650	0.00443	0.00659	0.076	0.339
50	0.00099	0.00089	0.00109	0.023	0.028	18,704	61,366	0.00359	0.00535	0.059	0.263
51	0.00088	0.00081	0.00096	0.021	0.024	22,581	74,086	0.00279	0.00415	0.049	0.218
52	0.00078	0.00071	0.00086	0.018	0.022	29,390	96,425	0.00224	0.00333	0.038	0.167
53	0.00070	0.00065	0.00075	0.017	0.019	35,067	115,048	0.00170	0.00253	0.032	0.140
54	0.00062	0.00057	0.00067	0.014	0.017	45,601	149,609	0.00136	0.00202	0.024	0.108

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

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**7-Strand Constructions – PERCON 15 - Hard Temper**

AWG	Construction	Diameter				Resistance		Weight		Break Strength	
		inch		mm		max		max		min	
		min	max	min	Max	Ω/mft	Ω/km	lb/mft	kg/km	Lb	N
22	7/30	0.0297	0.0303	0.754	0.770	21.9	71.8	2.19	3.26	51.2	228
24	7/32	0.0237	0.0243	0.602	0.617	34.4	113	1.41	2.09	32.6	145
26	7/34	0.0186	0.0192	0.472	0.488	55.8	183	0.879	1.31	20.1	89.3
28	7/36	0.0147	0.0153	0.373	0.389	89.3	293	0.558	0.830	12.5	55.8
30	7/38	0.0117	0.0123	0.297	0.312	141	462	0.361	0.537	7.94	35.3
32	7/40	0.00900	0.00960	0.229	0.244	238	782	0.220	0.327	4.70	20.9
34	7/42	0.00720	0.00780	0.183	0.198	372	1,221	0.145	0.216	3.01	13.4
36	7/44	0.00570	0.00630	0.145	0.160	594	1,949	0.0946	0.141	1.89	8.39
38	7/46	0.00441	0.00501	0.112	0.127	992	3,255	0.0598	0.0890	1.13	5.02
40	7/48	0.00342	0.00402	0.087	0.102	1,650	5,413	0.0385	0.0573	0.679	3.02
42	7/50	0.00267	0.00327	0.068	0.083	2,707	8,880	0.0255	0.0379	0.414	1.84

**19-Strand Unilay Constructions – PERCON 15 – Hard Temper**

AWG	Construction	Diameter				Resistance		Weight		Break Strength	
		inch		mm		max		max		min	
		min	max	Min	Max	Ω/mft	Ω/km	lb/mft	kg/km	lb	N
18	19/30	0.0467	0.0476	1.19	1.21	8.08	26.5	5.95	8.86	139	618
20	19/32	0.0373	0.0382	0.947	0.971	12.7	41.6	3.83	5.70	88.5	394
22	19/34	0.0293	0.0302	0.743	0.767	20.6	67.6	2.39	3.56	54.5	242
24	19/36	0.0231	0.0241	0.587	0.611	33.0	108	1.52	2.26	34.0	151
26	19/38	0.0184	0.0193	0.467	0.491	52.0	171	0.981	1.46	21.6	95.9
28	19/40	0.0142	0.0151	0.359	0.383	87.9	289	0.597	0.889	12.8	56.8
30	19/42	0.0113	0.0123	0.288	0.312	137	451	0.394	0.587	8.17	36.3
32	19/44	0.0090	0.0099	0.228	0.252	219	719	0.257	0.383	5.12	22.8

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