

Conductor Alloys



Percon[®] 17

PERCON[®] 17 has been developed to replace cadmium copper C162, specifically soft temper cadmium copper. This alloy is also available in hard temper.

PERCON[®] 17 has excellent resistance to corrosive environments.

PERCON[®] 17 does not contain any cadmium or environmentally hazardous elements.

PERCON[®] 17 is available bare or plated with silver, nickel or tin.

	SOFT TEMPER	HARD DRAWN
Tensile	58,000 psi (400 MPa)	95,000 psi (655 MPa)
Elongation	6%	1%
Electrical Conductivity	85% IACS	80% IACS
Electrical Resistivity	12.20 Ω-cmil/ft (2.028 μΩ-cm)	12.96 Ω-cmil/ft (2.155 μΩ-cm)
Melting Point	1986°F (1086°C)	1986°F (1086°C)
Density	0.319 lbs/in ³ (8.84 g/cm ³)	0.319 lbs/in ³ (8.84 g/cm ³)
Thermal Coefficient of Resistance	0.00322/°C	0.00322/°C

Reference Specifications: ASTM B 465, B 888

Single End – Bare PERCON[®] 17 – Soft Temper

AWG	Diameter					Resistance		Weight		Break Strength	
	nom	inch min	inch max	mm min	mm max	Ω/mft max	Ω/km max	lb/mft max	kg/km max	lb min	N min
30	0.0100	0.0099	0.0101	0.251	0.257	124.5	408.4	0.307	0.457	4.46	19.9
31	0.0089	0.0088	0.0090	0.224	0.229	157.6	516.9	0.244	0.363	3.53	15.7
32	0.0080	0.0079	0.0081	0.201	0.206	195.5	641.4	0.197	0.294	2.84	12.6
33	0.0071	0.0070	0.0072	0.178	0.183	249.0	816.9	0.156	0.232	2.23	9.9
34	0.0063	0.0062	0.0064	0.157	0.163	317.4	1,041	0.123	0.183	1.75	7.79
35	0.0056	0.0055	0.0057	0.140	0.145	403.3	1,323	0.0978	0.145	1.38	6.13
36	0.0050	0.0049	0.0051	0.124	0.130	508.2	1,667	0.0783	0.116	1.09	4.87
37	0.0045	0.0044	0.0046	0.112	0.117	630.2	2,068	0.0637	0.0948	0.882	3.92
38	0.0040	0.0039	0.0041	0.099	0.104	802.2	2,632	0.0506	0.0753	0.693	3.08
39	0.0035	0.0034	0.0036	0.086	0.091	1,055	3,463	0.0390	0.0581	0.527	2.34
40	0.0031	0.0030	0.0032	0.076	0.081	1,356	4,448	0.0308	0.0459	0.410	1.82
41	0.0028	0.0027	0.0029	0.069	0.074	1,674	5,491	0.0253	0.0377	0.332	1.48
42	0.0025	0.0024	0.0026	0.061	0.066	2,118	6,949	0.0203	0.0303	0.262	1.17
43	0.0022	0.0021	0.0023	0.053	0.058	2,767	9,077	0.0159	0.0237	0.201	0.894
44	0.0020	0.0019	0.0021	0.048	0.053	3,380	11,088	0.0133	0.0198	0.164	0.731

Custom constructions are available, please contact the sales department.

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

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Single End – Bare **PERCON® 17** – Hard Drawn

AWG	Diameter					Resistance max		Weight max		Break Strength min	
	nom	inch min	inch max	mm min	mm max	Ω/mft	Ω/km	lb/mft	kg/km	lb	N
30	0.0100	0.0099	0.0101	0.251	0.257	132.3	434.0	0.307	0.456	7.31	32.5
31	0.0089	0.0088	0.0090	0.224	0.229	167.4	549.0	0.244	0.362	5.78	25.7
32	0.0080	0.0079	0.0081	0.201	0.206	207.7	681.5	0.197	0.294	4.66	20.7
33	0.0071	0.0070	0.0072	0.178	0.183	264.6	868.0	0.156	0.232	3.66	16.3
34	0.0063	0.0062	0.0064	0.157	0.163	337.2	1,106	0.123	0.183	2.87	12.76
35	0.0056	0.0055	0.0057	0.140	0.145	428.6	1,406	0.0977	0.145	2.26	10.04
36	0.0050	0.0049	0.0051	0.124	0.130	539.9	1,771	0.0782	0.116	1.79	7.97
37	0.0045	0.0044	0.0046	0.112	0.117	669.6	2,197	0.0636	0.0947	1.445	6.43
38	0.0040	0.0039	0.0041	0.099	0.104	852.3	2,796	0.0505	0.0752	1.135	5.05
39	0.0035	0.0034	0.0036	0.086	0.091	1,121	3,679	0.0390	0.0580	0.863	3.84
40	0.0031	0.0030	0.0032	0.076	0.081	1,440	4,726	0.0308	0.0458	0.672	2.99
41	0.0028	0.0027	0.0029	0.069	0.074	1,778	5,834	0.0253	0.0376	0.544	2.42
42	0.0025	0.0024	0.0026	0.061	0.066	2,251	7,384	0.0203	0.0302	0.430	1.91
43	0.0022	0.0021	0.0023	0.053	0.058	2,940	9,644	0.0159	0.0237	0.329	1.464
44	0.0020	0.0019	0.0021	0.048	0.053	3,591	11,782	0.0133	0.0197	0.269	1.198
45	0.00176	0.00166	0.00186	0.042	0.047	4,705	15,435	0.0104	0.0155	.0206	0.915
46	0.00157	0.00147	0.00167	0.037	0.042	5,999	19,683	0.0084	0.0125	0.161	0.717
47	0.00140	0.00130	0.00150	0.033	0.038	7,671	25,167	0.0068	0.0101	0.126	0.561
48	0.00124	0.00114	0.00134	0.029	0.034	9,975	32,727	0.0054	0.0080	0.097	0.431
49	0.00111	0.00101	0.00121	0.026	0.031	12,708	41,694	0.0044	0.0066	0.076	0.339
50	0.00099	0.00089	0.00109	0.023	0.028	16,366	53,695	0.0036	0.0053	0.059	0.263

7 – Strand Constructions – Bare **PERCON® 17** – Soft Temper

AWG	Const.	Diameter				Resistance max		Weight max		Break Strength min	
		inch min	inch max	mm min	mm max	Ω/mft	Ω/km	lb/mft	kg/km	lb	N
22	7/30	0.0297	0.0303	0.754	0.770	18.1	59.4	2.18	3.24	31.3	139
24	7/32	0.0237	0.0243	0.602	0.617	28.2	92.5	1.39	2.08	19.9	88.5
26	7/34	0.0186	0.0192	0.472	0.488	45.8	150.3	0.871	1.30	12.3	54.5
28	7/36	0.0147	0.0153	0.373	0.389	73.4	240.8	0.553	0.824	7.66	34.1
30	7/38	0.0117	0.0123	0.297	0.312	115.4	378.6	0.356	0.530	4.85	21.6
32	7/40	0.0090	0.0096	0.229	0.244	195.7	642.1	0.218	0.324	2.87	12.8
34	7/42	0.0072	0.0078	0.183	0.198	305.8	1,003	0.144	0.214	1.84	8.17
36	7/44	0.0057	0.0063	0.145	0.160	486.1	1,595	0.0935	0.139	1.15	5.12
38	7/46	0.0044	0.0050	0.112	0.127	815.1	2,674	0.0594	0.0884	0.689	3.07
40	7/48	0.0034	0.0040	0.087	0.102	1,359	4,457	0.0383	0.0570	0.414	1.84
42	7/50	0.0027	0.0033	0.068	0.083	2,229	7,313	0.0253	0.0377	0.253	1.12

7 – Strand Constructions – Bare **PERCON® 17** – Hard Drawn

AWG	Const.	Diameter				Resistance max		Weight max		Break Strength min	
		inch min	inch max	mm min	mm max	Ω/mft	Ω/km	lb/mft	kg/km	lb	N
22	7/30	0.0297	0.0303	0.754	0.770	19.2	62.9	2.18	3.24	51.2	228
24	7/32	0.0237	0.0243	0.602	0.617	30.0	98.3	1.39	2.08	32.6	145
26	7/34	0.0186	0.0192	0.472	0.488	48.7	159.7	0.871	1.30	20.1	89.3
28	7/36	0.0147	0.0153	0.373	0.389	77.9	255.7	0.553	0.824	12.5	55.8
30	7/38	0.0117	0.0123	0.297	0.312	122.6	402.2	0.356	0.530	7.94	35.3
32	7/40	0.0090	0.0096	0.229	0.244	207.9	682.1	0.218	0.324	4.70	20.9
34	7/42	0.0072	0.0078	0.183	0.198	324.9	1,066	0.144	0.214	3.01	13.4
36	7/44	0.0057	0.0063	0.145	0.160	516.5	1,695	0.0935	0.139	1.89	8.39
38	7/46	0.0044	0.0050	0.112	0.127	857.1	2,812	0.0594	0.0884	1.13	5.02
40	7/48	0.0034	0.0040	0.087	0.102	1,444	4,736	0.0383	0.0570	0.679	3.02
42	7/50	0.0027	0.0033	0.068	0.083	2,368	7,770	0.0253	0.0377	0.414	1.84

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19 – Strand Unilay Constructions – Bare **PERCON® 17** – Soft Temper

AWG	Const.	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	1.209	6.84	22.4	5.73	8.53	84.8	377
20	19/32	0.0372	0.0382	0.945	0.970	10.7	35.1	3.69	5.49	54.0	240
22	19/34	.0.292	0.0302	0.742	0.767	17.5	57.4	2.32	3.45	33.3	148
24	19/36	0.0231	0.0240	0.587	0.610	27.9	91.5	1.46	2.17	20.8	92.4
26	19/38	0.0184	0.0193	0.467	0.490	44.1	144.7	0.946	1.41	13.2	58.6
28	19/40	0.0141	0.0151	0.358	0.384	74.5	244.4	0.576	0.857	7.79	34.6
30	19/42	0.0113	0.0123	0.287	0.312	115.9	380.2	0.383	0.570	4.99	22.2
32	19/44	0.0095	0.0105	0.241	0.267	181.4	595.3	0.257	0.382	3.12	13.9
34	19/46	0.0074	0.0084	0.187	0.212	303.1	994.5	0.162	0.242	1.87	8.32

19 – Strand Unilay Constructions – Bare **PERCON® 17** – Hard Drawn

AWG	Const.	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	1.209	7.27	23.9	5.73	8.53	139	618
20	19/32	0.0372	0.0382	0.945	0.970	11.4	37.5	3.69	5.49	88.5	394
22	19/34	.0.292	0.0302	0.742	0.767	18.6	61.1	2.32	3.45	54.5	242
24	19/36	0.0231	0.0240	0.587	0.610	29.6	97.2	1.46	2.17	34.0	151
26	19/38	0.0184	0.0193	0.467	0.490	46.9	153.7	0.946	1.41	21.6	95.9
28	19/40	0.0141	0.0151	0.358	0.384	79.1	259.6	0.576	0.857	12.8	56.8
30	19/42	0.0113	0.0123	0.287	0.312	123.1	403.9	0.383	0.570	8.17	36.3
32	19/44*	0.0095	0.0105	0.241	0.267	192.8	632.5	0.257	0.382	5.12	22.8
34	19/46*	0.0074	0.0084	0.187	0.212	322.1	1,057	0.162	0.242	3.06	13.6

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