

Aerospace Conductors



Percon[®] 24

PERCON[®] 24 is an alloy developed specifically to meet the requirements of Mil-W-22759, Mil-W-25038, Mil-W-29606, NEMA WC 67 and ASTM B 624. It replaces cadmium containing PD135 in these applications. A truly high performance conductor comprising a minimum strength of 60 ksi (414 MPa), elongation of 8%, electrical conductivity of 90% IACS minimum, excellent flex life and exceptional softening resistance to elevated operating or high fluoropolymer insulating temperatures.

PERCON[®] 24 has been approved for use in military aerospace wire and cable and is also suitable for European aerospace wire and cable EN2083, prEN4434 and ISO2635.

PERCON[®] 24 has excellent resistance to corrosive environments. It exhibits the nobility inherent to all high copper alloys.

PERCON[®] 24 does not contain any cadmium or environmentally hazardous elements.

CONDUCTOR PROPERTIES		
Tensile	60,000 psi (414 MPa)	Reference Specs
Elongation	8%	EN2083
Electrical Conductivity	90% IACS	prEN4434
Electrical Resistivity	11.52 Ω -cmil/ft (1.91 $\mu\Omega$ -cm)	MIL-W-22759
Melting Point	1972°F (1078°C)	MIL-W-29606
Density	0.323 lbs/in ³ (8.94 g/cm ³)	NEMA WC 67
Thermal Coefficient of Resistance	0.00342/°C	ASTM B 624

Silver Plated Percon[®] 24

19 - Strand Unilay Metric Constructions - Light Weight (Tight Tolerance) - Silver Plated PERCON[®] 24 Soft

Nom. cross-section mm ²	Construction	Diameter				Resistance max		Weight min - max		Break Strength min	
		mm		inch		Ω /km	Ω /mft	kg/km	lb/mft	N	lb
0.12	19/0.09 (19/39)	0.43	0.44	0.0168	0.0175	160	48.8	1.11-1.17	0.743-0.785	52	11.6
0.15	19/0.10 (19/38)	0.45	0.46	0.0176	0.0183	146	44.6	1.20-1.26	0.805-0.849	56	12.6
0.25	19/0.12 (19/36)	0.55	0.56	0.0215	0.0222	97.3	29.6	1.79-1.88	1.21-1.26	84	18.9

7 and 19 - Strand Unilay AWG Constructions - Light Weight (Tight Tolerance) - Silver Plated PERCON[®] 24 Soft

AWG	Const.	Diameter				Resistance max		Weight max		Break Strength min	
		inch		mm		Ω /mft	Ω /km	lb/mft	kg/km	lb	N
30	7/38	0.0117	0.0120	0.30	0.31	108.1	355	0.346	0.515	5.17	23
28	7/36	0.0147	0.0150	0.37	0.38	68.8	226	0.542	0.807	8.16	36
26	19/38	0.0180	0.0187	0.46	0.47	43.8	144	0.913	1.36	14.2	63
24	19/36	0.0230	0.0236	0.58	0.60	27.6	90.6	1.44	2.14	22.4	100
22	19/34	0.0290	0.0296	0.74	0.75	17.5	57.4	2.27	3.38	35.8	159
20	19/32	0.0370	0.0376	0.94	0.95	10.7	35.1	3.66	5.44	58.1	258

Custom constructions are available, please contact the sales department.

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

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January 2002

19 - Strand Metric Constructions - General Purpose - Silver Plated PERCON® 24 Soft

Nom. cross-section mm ²	Construction (Unilay)	Diameter				Resistance max		Weight max		Break Strength min	
		mm		inch		Ω/km	Ω/mft	kg/km	lb/mft	N	lb
0.15	19/0.10 (19/38)	0.46	0.48	0.0180	0.0190	139	52.4	1.40	0.941	59	13.3
0.25	19/0.12 (19/36)	0.56	0.58	0.0218	0.0230	95.2	29.0	2.00	1.34	86	19.4
	(Concentric)										
0.15	19/0.10 (19/38)	0.48	0.51	0.0188	0.0202	135	41.2	1.44	0.970	59	13.3
0.25	19/0.12 (19/36)	0.59	0.61	0.0231	0.0242	92.7	28.2	2.07	1.39	86	19.4

Nickel Plated Percon® 24

19 - Strand Unilay Metric Constructions - Light Weight (Tight Tolerance) - Nickel Plated PERCON® 24 Soft

Nom. cross-section mm ²	Construction	Diameter				Resistance max		Weight min - max		Break Strength min	
		mm		inch		Ω/km	Ω/mft	kg/km	lb/mft	N	lb
0.12	19/0.09 (19/39)	0.43	0.44	0.0168	0.0175	170	52.0	1.10-1.19	0.736-0.800	52	11.6
0.15	19/0.10 (19/38)	0.45	0.47	0.0176	0.0187	155	47.4	1.20-1.30	0.799-0.879	56	12.6
0.25	19/0.12 (19/36)	0.55	0.57	0.0215	0.0226	103	31.6	1.79-1.93	1.20-1.30	84	18.9

7 and 19 - Strand Unilay AWG Constructions - Light Weight (Tight Tolerance) - Nickel Plated PERCON® 24 Soft

AWG	Const.	Diameter				Resistance max		Weight max		Break Strength min	
		inch		mm		Ω/mft	Ω/km	lb/mft	kg/km	lb	N
30	7/38	0.0117	0.0122	0.30	0.31	114.7	376	0.352	0.524	5.17	23
28	7/36	0.0147	0.0151	0.37	0.38	71.3	234	0.549	0.817	8.16	36
26	19/38	0.0180	0.0186	0.46	0.47	44.1	145	0.906	1.35	14.2	63
24	19/36	0.0230	0.0236	0.58	0.60	27.2	89.3	1.42	2.11	22.4	100
22	19/34	0.0290	0.0296	0.74	0.75	17.1	56.1	2.26	3.37	35.8	159
20	19/32	0.0370	0.0376	0.94	0.95	10.6	34.7	3.60	5.35	58.1	258

19 - Strand Unilay Metric Constructions - General Purpose - Nickel Plated PERCON® 24 Soft

Nom. cross-section mm ²	Construction (Unilay)	Diameter				Resistance max		Weight max		Break Strength min	
		mm		inch		Ω/km	Ω/mft	kg/km	lb/mft	N	lb
0.15	19/0.10 (19/38)	0.46	0.50	0.0180	0.0198	147	45.0	1.53	1.03	59	13.3
0.25	19/0.12 (19/36)	0.56	0.60	0.0219	0.0238	101	30.8	2.16	1.45	86	19.4
	(Concentric)										
0.15	19/0.10 (19/38)	0.48	0.53	0.0188	0.0210	147	44.9	1.54	1.04	58	12.9
0.25	19/0.12 (19/36)	0.57	0.62	0.225	0.0245	105	32.0	2.10	1.41	81	18.1

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