

KANTHAL A, AF, AE

Wire

Standard stock items	Alloy	Diameter range mm	Resistivity $\Omega\text{mm}^2\text{m}^{-1}$	Density gcm^{-3}
■	KANTHAL A	10.0-0.05	1.39	7.15
■	KANTHAL AF	10.0-0.10	1.39	7.15
—	KANTHAL AE	10.0-0.20	1.39	7.15

To obtain resistance at working temperature, multiply by the factor C_t in the following table:

°C	20	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300
C_t	1.00	1.00	1.01	1.01	1.02	1.03	1.04	1.04	1.05	1.05	1.06	1.06	1.06	1.06

Diameter mm	AF	Resistance		Weight g/m	Surface area cm^2/m	Cross sectional area mm^2
		at 20 °C Ω/m	at 20 °C cm^2/Ω^2			
10	10.0	0.0177	17751	562	314	78.
	8.25	0.0260	9968	382	259	53.5
	8.0	0.0277	9089	359	251	50.3
	7.5	0.0315	7489	316	236	44.2
	7.35	0.0328	7048	303	231	42.4
	7.0	0.0361	6089	275	220	38.5
	6.54	0.0414	4965	240	205	33.6
	6.5	0.0419	4875	237	204	33.2
	6.0	0.0492	3834	202	188	28.3
	5.83	0.0521	3517	191	183	26.7
	5.5	0.0585	2953	170	173	23.8
	5.2	0.0655	2496	152	163	21.2
	5.0	0.0708	2219	140	157	19.6
	4.75	0.0784	1902	127	149	17.7
	4.62	0.0829	1750	120	145	16.8
	4.5	0.0874	1618	114	141	15.9
	4.25	0.0980	1363	101	134	14.2
	4.11	0.105	1232	94.9	129	13.3
	4.0	0.111	1136	89.8	126	12.6
	3.75	0.126	936	79.0	118	11.0
	3.65	0.133	863	74.8	115	10.5
	3.5	0.144	761	68.8	110	9.62
	3.25	0.168	609	59.3	102	8.30
	3.2	0.173	582	57.5	101	8.04
	3.0	0.197	479	50.5	94.2	7.07
	2.9	0.210	433	47.2	91.1	6.61
	2.8	0.226	390	44.0	88.0	6.16
	2.6	0.262	312	38.0	81.7	5.31
	2.5	0.283	277	35.1	78.5	4.91
	2.4	0.307	245	32.3	75.4	4.52
	2.3	0.335	216	29.7	72.3	4.15

Diameter mm	AF	Resistance		Weight g/m	Surface area cm^2/m	Cross sectional area mm^2	
		at 20 °C Ω/m	at 20 °C cm^2/Ω^2				
	2.25	0.350	202	28.4	70.7	3.98	
	2.2	0.366	189	27.2	69.1	3.80	
	2.0	0.442	142	22.5	62.8	3.14	
	1.8	0.546	104	18.2	56.5	2.54	
	1.7	0.612	87.2	16.2	53.4	2.27	
	1.65	0.650	79.7	15.3	51.8	2.14	
	1.6	0.691	72.7	14.4	50.3	2.01	
	1.5	0.787	59.9	12.6	47.1	1.77	
	1.4	0.903	48.7	11.0	44.0	1.54	
	1.3	1.05	39.0	9.49	40.8	1.33	
	1.2	1.23	30.7	8.09	37.7	1.13	
	1.1	1.46	23.6	6.79	34.6	0.950	
	1.0	1.77	17.8	5.62	31.4	0.785	
	0.95	1.96	15.2	5.07	29.8	0.709	
	0.90	0.90	2.18	12.9	4.55	28.3	0.636
	0.85	0.85	2.45	10.9	4.06	26.7	0.567
	0.80	0.80	2.77	9.09	3.59	25.1	0.503
	0.75	0.75	3.15	7.49	3.16	23.6	0.442
	0.70	0.70	3.61	6.09	2.75	22.0	0.385
	0.65	0.65	4.19	4.87	2.37	20.4	0.332
	0.60	0.60	4.92	3.83	2.02	18.8	0.283
	0.55	0.55	5.85	2.95	1.70	17.3	0.238
	0.50	0.50	7.08	2.22	1.40	15.7	0.196
	0.45	0.45	8.74	1.62	1.14	14.1	0.159
	0.40	0.40	11.1	1.14	0.898	12.6	0.126
	0.35	0.35	14.4	0.761	0.688	11.0	0.0962
	0.30	0.30	19.7	0.479	0.505	9.42	0.0707
	0.25		28.3	0.277	0.351	7.85	0.0491
	0.20		44.2	0.142	0.225	6.28	0.0314
	0.15		78.7	0.0599	0.126	4.71	0.0177