［JIS　C　2532］

東京抵抗線株式会社

Alloys　:　CN15　(Copper Nickel Resistance Wire　Type 15)

Outstanding resistance to corrosion and can be operated to 250℃
Non magnetic and material are easy to process.
Suitable for resistive heating elements

JIS	JIS Code	Resistivity ［μΩm］	Average TCR ［×10⁻⁶/℃］
GCN15	C 2532	0.15±0.015	＊490 (23～100℃)

Thermal expansion coefficient ×10⁻⁶/℃	Density g/cm³ (20℃)	Melting Point ℃	Max operating temperature ℃
17.5	8.9	1100	250

Chemical Composition	Mn	Ni	Cu+Ni+Mn
(%)	≦1.5	8～12	≧99

Alloys	Type	Diameter (mm)	
CN15W	Wire	φ6.00～0.05	
CN15R	Ribbon	t=2.90~0.05	w=40~0.4

Copper Nickel Resistance Wire【Resistance・Length・Weight】

Alloys	Resistivity（23℃μΩm）
CN15W	0.15±0.015

Diameter (mm)	Tolerance (mm)	Cross section (mm^2)	Resistance Tolerance (%)	DC Resistance (Ω/m)	Length (m/Kg)	Weight (g/m)
6.00	±0.080	28.27	±5	**0.00531**	3.97	252
5.50	±0.080	23.76	±5	**0.00631**	4.73	211
5.00	±0.080	19.64	±5	**0.00764**	5.72	175
4.50	±0.080	15.90	±5	**0.00943**	7.06	142
4.00	±0.080	12.57	±5	**0.0119**	8.94	112
3.50	±0.080	9.621	±5	**0.0156**	11.7	85.6
3.20	±0.060	8.042	±5	**0.0187**	14.0	71.6
2.90	±0.060	6.605	±5	**0.0227**	17.0	58.8
2.60	±0.060	5.309	±5	**0.0283**	21.2	47.3
2.30	±0.050	4.155	±5	**0.0361**	27.0	37.0
2.00	±0.050	3.142	±5	**0.0477**	35.8	28.0
1.80	±0.050	2.545	±5	**0.0589**	44.2	22.6
1.60	±0.040	2.011	±5	**0.0746**	55.9	17.9
1.50	±0.040	1.767	±5	**0.0849**	63.6	15.7
1.40	±0.040	1.539	±5	**0.0974**	73.0	13.7
1.30	±0.040	1.327	±5	**0.113**	84.7	11.8
1.20	±0.040	1.131	±5	**0.133**	99.3	10.1
1.10	±0.030	0.9503	±6	**0.158**	118	8.46
1.00	±0.030	0.7854	±6	**0.191**	143	6.99
0.90	±0.030	0.6362	±6	**0.236**	177	5.66
0.85	±0.030	0.5675	±6	**0.264**	198	5.05
0.80	±0.030	0.5027	±6	**0.298**	224	4.47
0.75	±0.025	0.4418	±6	**0.340**	254	3.93
0.70	±0.025	0.3848	±6	**0.390**	292	3.43
0.65	±0.025	0.3318	±6	**0.452**	339	2.95
0.60	±0.025	0.2827	±6	**0.531**	397	2.52
0.55	±0.020	0.2376	±7	**0.631**	473	2.11
0.50	±0.020	0.1964	±7	**0.764**	572	1.75
0.45	±0.020	0.1590	±7	**0.943**	706	1.42
0.40	±0.015	0.1257	±7	**1.19**	894	1.12

Copper Nickel Resistance Wire【Resistance・Length・Weight】

Alloys	Resistivity（23℃μΩm）
CN15W	0.15±0.015

Diameter (mm)	Tolerance (mm)	Cross section (mm^2)	Resistance Tolerance (%)	DC Resistance (Ω/m)	Length (m/Kg)	Weight (g/m)
0.35	±0.015	0.09621	±7	**1.56**	1168	0.856
0.32	±0.015	0.08042	±7	**1.87**	1397	0.716
0.29	±0.012	0.06605	±7	**2.27**	1701	0.588
0.26	±0.012	0.05309	±8	**2.83**	2116	0.473
0.23	±0.012	0.04155	±8	**3.61**	2704	0.370
0.20	±0.010	0.03142	±8	**4.77**	3577	0.280
0.18	±0.010	0.02545	±8	**5.89**	4415	0.226
0.16	±0.010	0.02011	±8	**7.46**	5588	0.179
0.15	±0.008	0.01767	±8	**8.49**	6358	0.157
0.14	±0.008	0.01539	±8	**9.74**	7299	0.137
0.13	±0.008	0.01327	±9	**11.3**	8465	0.118
0.12	±0.008	0.01131	±9	**13.3**	9935	0.101
0.11	±0.006	0.009503	±9	**15.8**	11823	0.0846
0.10	±0.006	0.007854	±9	**19.1**	14306	0.0699
0.09	±0.005	0.006362	±10	**23.6**	17662	0.0566
0.08	±0.005	0.005027	±10	**29.8**	22353	0.0447
0.07	±0.005	0.003848	±10	**39.0**	29196	0.0343
0.06	±0.004	0.002827	±11	**53.1**	39739	0.0252