
42%NiFe

Nickel Alloy Wire,Ribbon

TOKYO RESISTANCE WIRE CO., LTD.

1-8-29 Kamata Ohta-Ku, Tokyo 144-0052

Phone : +81-3-3736-5201

Faxmile : +81-3-3736-5429

mail : mail@tokyo-resistance-wire.com

[http : //main.tokyo-resistance-wire.com](http://main.tokyo-resistance-wire.com)

Alloys : 42%NiFe (Nickel Alloy Wire,Ribbon)

It is used in the electronics field such as IC leads using corrosion resistance such as hard and soft glass sealing materials.

Electrical Resistivity [$\mu\Omega\text{m}$]	Average TCR [$\times 10^{-6}/^{\circ}\text{C}$]
* 0.65	* 2360

(*)Reference value

Thermal Expansion Coefficient $\times 10^{-6}/$		Density g/cm ³ (20°C)
30~300°C	4.0~4.7	8.10
30~450°C	6.7~7.4	

Chemical Composition	C	Si	Mn	Ni	Fe
(%)	≤ 0.05	≤ 0.3	≤ 0.6	41.0	BAL

Alloys	Type	Diameter (mm)
42%NiFe	Wire	$\phi 5.00 \sim 0.03$
	Ribbon	Please consult

42%NiFe (Nickel Alloy Wire, Ribbon)

Resistance・Length・Weight

Wire Electrical Resistivity (23°CμΩm) *0.65 (*)Reference value

Diameter (mm)	Tolerance (mm)	Cross section (mm ²)	Resistance Tolerance (%)	DC Resistance (Ω/m)	Length (m/Kg)	Weight (g/m)
5.00	±0.060	19.6	±5	0.0357	6.18	162
4.50	±0.050	15.9	±5	0.0440	7.63	131
4.00	±0.050	12.6	±5	0.0557	9.65	104
3.50	±0.050	9.62	±6	0.0728	12.6	79.3
3.20	±0.040	8.04	±6	0.0871	15.1	66.3
2.90	±0.040	6.60	±6	0.1060	18.4	54.5
2.60	±0.040	5.31	±6	0.1319	22.8	43.8
2.30	±0.040	4.15	±6	0.169	29.2	34.3
2.00	±0.030	3.14	±6	0.223	38.6	25.9
1.80	±0.030	2.54	±6	0.275	47.7	21.0
1.60	±0.030	2.01	±7	0.348	60.3	16.6
1.50	±0.030	1.77	±7	0.396	68.6	14.6
1.40	±0.030	1.54	±7	0.455	78.8	12.7
1.30	±0.030	1.33	±7	0.528	91.4	10.9
1.20	±0.030	1.13	±7	0.619	107	9.33
1.10	±0.030	0.950	±7	0.737	128	7.84
1.00	±0.030	0.785	±7	0.892	154	6.48
0.90	±0.030	0.636	±7	1.101	191	5.25
0.85	±0.030	0.567	±7	1.234	214	4.68
0.80	±0.020	0.502	±7	1.393	241	4.14
0.75	±0.020	0.442	±7	1.585	275	3.64
0.70	±0.020	0.385	±7	1.82	315	3.17
0.65	±0.020	0.332	±7	2.11	365	2.74
0.60	±0.020	0.283	±7	2.48	429	2.33
0.55	±0.020	0.237	±8	2.95	510	1.96
0.50	±0.010	0.196	±8	3.57	618	1.62
0.45	±0.010	0.159	±8	4.40	763	1.31
0.40	±0.010	0.126	±8	5.57	965	1.04
0.35	±0.010	0.0962	±8	7.28	1260	0.793
0.32	±0.010	0.0804	±8	8.71	1508	0.663
0.29	±0.010	0.0660	±8	10.60	1836	0.545
0.26	±0.010	0.0531	±8	13.19	2284	0.438
0.23	±0.010	0.0415	±8	16.9	2919	0.343
0.20	±0.006	0.0314	±9	22.3	3860	0.259
0.18	±0.006	0.0254	±9	27.5	4766	0.210
0.16	±0.006	0.0201	±9	34.8	6032	0.166
0.15	±0.006	0.0177	±9	39.6	6863	0.146
0.14	±0.006	0.0154	±9	45.5	7878	0.127
0.13	±0.006	0.0133	±9	52.8	9137	0.109
0.12	±0.006	0.0113	±9	61.9	10723	0.0933
0.11	±0.006	0.00950	±9	73.7	12761	0.0784
0.10	±0.006	0.00785	±9	89.2	15441	0.0648
0.09	±0.005	0.00636	±10	110.1	19063	0.0525
0.08	±0.005	0.00502	±10	139.3	24127	0.0414
0.07	±0.005	0.00385	±10	182	31512	0.0317
0.06	±0.004	0.00283	±11	248	42892	0.0233
0.05	±0.004	0.00196	±11	357	61764	0.0162
0.04	±0.003	0.00126	±12	557	96506	0.0104
0.03	±0.003	0.000707	±12	991	171567	0.00583