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# Monel

## Nickel Alloy Wire,Ribbon

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# Alloys : Monel (Nickel Alloy Wire, Ribbon)

It has excellent corrosion resistance and is used for seawater desalination plants, heat exchange equipment, and coating materials for marine structures.

Electrical Resistivity [ $\mu\Omega\text{m}$ ]
0.50

(\*) Reference value

Thermal Expansion Coefficient $\times 10^{-6}/$	Density g/cm <sup>3</sup> (20°C)	Melting Point °C	Max Operating Temperature °C
13.9	8.80	1350	400

Chemical Composition	C	Si	Mn	Ni	Cu	Fe	S
(%)	$\leq 0.3$	$\leq 0.5$	$\leq 2.0$	$\geq 63$	BAL	$\leq 2.5$	$\leq 0.024$

Alloys	Type	Diameter (mm)
Monel400	Wire	$\phi 5.00 \sim 0.03$
	Ribbon	Please consult

# Monel (Nickel Alloy Wire, Ribbon)

## Resistance・Length・Weight

Wire Electrical Resistivity (23°CμΩm) 0.5 ( \* )Reference value

Diameter (mm)	Tolerance (mm)	Cross section (mm <sup>2</sup> )	Resistance Tolerance (%)	DC Resistance (Ω/m)	Length (m/Kg)	Weight (g/m)
5.00	±0.060	19.6		0.0255	5.73	175
4.50	±0.050	15.9		0.0315	7.07	141
4.00	±0.050	12.6		0.0398	8.95	112
3.50	±0.050	9.62		0.0520	11.7	85.6
3.20	±0.040	8.04		0.0622	14.0	71.5
2.90	±0.040	6.60		0.0757	17.0	58.8
2.60	±0.040	5.31		0.0942	21.2	47.2
2.30	±0.040	4.15		0.0120	27.1	37.0
2.00	±0.030	3.14		0.0159	35.8	27.9
1.80	±0.030	2.54		0.0197	44.2	22.6
1.60	±0.030	2.01		0.0249	55.9	17.9
1.50	±0.030	1.77		0.0283	63.6	15.7
1.40	±0.030	1.54		0.0325	73.0	13.7
1.30	±0.030	1.33		0.0377	84.7	11.8
1.20	±0.030	1.13		0.0442	99.4	10.1
1.10	±0.030	0.950		0.0526	118	8.45
1.00	±0.030	0.785		0.0637	143	6.99
0.90	±0.030	0.636		0.0786	177	5.66
0.85	±0.030	0.567		0.0882	198	5.05
0.80	±0.020	0.502		0.0995	224	4.47
0.75	±0.020	0.442		1.13	254	3.93
0.70	±0.020	0.385		1.30	292	3.42
0.65	±0.020	0.332		1.51	339	2.95
0.60	±0.020	0.283		1.77	398	2.52
0.55	±0.020	0.237		2.11	473	2.11
0.50	±0.010	0.196		2.55	573	1.75
0.45	±0.010	0.159		3.15	707	1.41
0.40	±0.010	0.126		3.98	895	1.12
0.35	±0.010	0.0962		5.20	1168	0.856
0.32	±0.010	0.0804		6.22	1398	0.715
0.29	±0.010	0.0660		7.57	1702	0.588
0.26	±0.010	0.0531		9.42	2117	0.472
0.23	±0.010	0.0415		12.0	2706	0.370
0.20	±0.006	0.0314		15.9	3578	0.279
0.18	±0.006	0.0254		19.7	4418	0.226
0.16	±0.006	0.0201		24.9	5591	0.179
0.15	±0.006	0.0177		28.3	6361	0.157
0.14	±0.006	0.0154		32.5	7303	0.137
0.13	±0.006	0.0133		37.7	8469	0.118
0.12	±0.006	0.0113		44.2	9940	0.101
0.11	±0.006	0.00950		52.6	11829	0.0845
0.10	±0.006	0.00785		63.7	14313	0.0699
0.09	±0.005	0.00636		78.6	17671	0.0566
0.08	±0.005	0.00502		99.5	22365	0.0447
0.07	±0.005	0.00385		130	29211	0.0342
0.06	±0.004	0.00283		177	39759	0.0252
0.05	±0.004	0.00196		255	57253	0.0175
0.04	±0.003	0.00126		398	89458	0.0112
0.03	±0.003	0.000707		708	159037	0.00629