

[JIS C 2520]

[JIS C 2532]



Alloys : NCH1 (Nickel Chrome Type 1)

Characteristic

Outstanding resistance to corrosion and have excellent performance

High temperature operation. Good on cold working

Suitable for high temperature heating application and high resistor.

JIS	JIS Code	Electrical Resistivity [$\mu\Omega\text{m}$]	Average TCR [$\times 10^{-6}/^{\circ}\text{C}$]
NCH1 GNC108	C 2520 C 2532	1.08 ± 0.05	* 140 (20~1000 $^{\circ}\text{C}$)

Thermal Expansion Coefficient $\times 10^{-6}/^{\circ}\text{C}$	Specific Heat J/g · K (20 $^{\circ}\text{C}$)	Thermal Conductivity w/m · K	Density g/cm ³ (20 $^{\circ}\text{C}$)	Melting Point $^{\circ}\text{C}$	Max Operating Temperature $^{\circ}\text{C}$
17	0.42	15	8.41	1400	1100

Chemical Composition	C	Si	Mn	Ni	Cr	Fe
(%)	≤ 0.15	0.75~1.6	≤ 2.5	≥ 77	19~21	≤ 1

Resistance increase by temperature

$^{\circ}\text{C}$	20	100	200	300	400	500	600	700	800	900	1000	1100	1200
係数	1.000	1.009	1.024	1.039	1.056	1.070	1.068	1.062	1.060	1.063	1.070	1.080	1.09.3

Alloys	Type	Diameter (mm)	
NCHW1	Wire	$\phi 6.00 \sim 0.025$	
NCHR1	Ribbon	$t=2.90 \sim 0.05$	$w=40 \sim 0.4$
NCH1P	Plate	Please consult	
NCH1	Foil	$t=0.40 \sim 0.02$	$w=120 \sim 5$

Nickel Chrome Heating Wire **[Resistance • Length • Weight]**

Alloys NCHW1	Resistivity (23°CμΩm) 1.08±0.05
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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	0.0382	4.21	238
5.50	±0.063	23.76	±5	0.0455	5.00	200
5.00	±0.063	19.64	±5	0.0550	6.06	165
4.50	±0.063	15.90	±5	0.0679	7.48	134
4.00	±0.063	12.57	±5	0.0859	9.46	106
3.50	±0.050	9.621	±5	0.112	12.4	80.9
3.20	±0.050	8.042	±5	0.134	14.8	67.6
2.90	±0.050	6.605	±5	0.164	18.0	55.5
2.60	±0.040	5.309	±5	0.203	22.4	44.7
2.30	±0.040	4.155	±5	0.260	28.6	34.9
2.00	±0.040	3.142	±5	0.344	37.8	26.4
1.80	±0.040	2.545	±5	0.424	46.7	21.4
1.60	±0.032	2.011	±5	0.537	59.1	16.9
1.50	±0.032	1.767	±5	0.611	67.3	14.9
1.40	±0.032	1.539	±5	0.702	77.2	12.9
1.30	±0.032	1.327	±5	0.814	89.6	11.2
1.20	±0.025	1.131	±5	0.955	105	9.51
1.10	±0.025	0.9503	±6	1.14	125	7.99
1.00	±0.025	0.7854	±6	1.38	151	6.61
0.90	±0.025	0.6362	±6	1.70	187	5.35
0.85	±0.025	0.5675	±6	1.90	210	4.77
0.80	±0.020	0.5027	±6	2.15	237	4.23
0.75	±0.020	0.4418	±6	2.44	269	3.72
0.70	±0.020	0.3848	±6	2.81	309	3.24
0.65	±0.020	0.3318	±6	3.25	358	2.79
0.60	±0.020	0.2827	±6	3.82	421	2.38
0.55	±0.016	0.2376	±7	4.55	500	2.00
0.50	±0.016	0.1964	±7	5.50	606	1.65
0.45	±0.016	0.1590	±7	6.79	748	1.34
0.40	±0.016	0.1257	±7	8.59	946	1.06

