

[JIS C 2520]

[JIS C 2532]



## Alloys : NCH2 (Nickel Chrome Type 2)

### Characteristic

Have good performance on cold working and compared to type 1,  
The strength are slightly weaker.

Suitable for heating device, resistors.

JIS	JIS Code	Electrical Resistivity [ $\mu\Omega\text{m}$ ]	Average TCR [ $\times 10^{-6}/^{\circ}\text{C}$ ]
NCH2	C 2520	1.12 $\pm$ 0.05	* 220 (20~1000 $^{\circ}\text{C}$ )
GNC112	C 2532		

	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 <sup>3</sup> (20 $^{\circ}\text{C}$ )	Melting Point $^{\circ}\text{C}$	Max Operating Temperature $^{\circ}\text{C}$
	17	0.46	13	8.25	1400	1000

Chemical Composition	C	Si	Mn	Ni	Cr	Fe
(%)	$\leq 0.15$	0.75~1.6	$\leq 1.5$	$\geq 57$	15~18	BAL

Resistance increase by temperature

$^{\circ}\text{C}$	20	100	200	300	400	500	600	700	800	900	1000	1100	1200
係数	1.000	1.014	1.031	1.048	1.065	1.077	1.083	1.085	1.090	1.095	1.103		

Alloys	Type	Diameter (mm)	
NCHW2	Wire	$\phi 6.00 \sim 0.025$	
NCHR2	Ribbon	t=2.90~0.05	w=40~0.4
NCH2P	Plate	Please Consult	
NCH2	Foil	t=0.40~0.02	w=120~5

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

Alloy <b>NCHW2</b>	Resistivity (23°C μΩm) <b>1.12±0.05</b>
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Diameter (mm)	Tolerance (mm)	Cross section (mm <sup>2</sup> )	Resistance Tolerance (%)	DC Resistance (Ω/m)	Length (m/Kg)	Weight (g/m)
<b>6.00</b>	±0.080	28.27	±5	<b>0.0396</b>	4.29	233
<b>5.50</b>	±0.063	23.76	±5	<b>0.0471</b>	5.10	196
<b>5.00</b>	±0.063	19.64	±5	<b>0.0570</b>	6.17	162
<b>4.50</b>	±0.063	15.90	±5	<b>0.0704</b>	7.62	131
<b>4.00</b>	±0.063	12.57	±5	<b>0.0891</b>	9.65	104
<b>3.50</b>	±0.050	9.621	±5	<b>0.116</b>	12.6	79.4
<b>3.20</b>	±0.050	8.042	±5	<b>0.139</b>	15.1	66.4
<b>2.90</b>	±0.050	6.605	±5	<b>0.170</b>	18.4	54.5
<b>2.60</b>	±0.040	5.309	±5	<b>0.211</b>	22.8	43.8
<b>2.30</b>	±0.040	4.155	±5	<b>0.270</b>	29.2	34.3
<b>2.00</b>	±0.040	3.142	±5	<b>0.357</b>	38.6	25.9
<b>1.80</b>	±0.040	2.545	±5	<b>0.440</b>	47.6	21.0
<b>1.60</b>	±0.032	2.011	±5	<b>0.557</b>	60.3	16.6
<b>1.50</b>	±0.032	1.767	±5	<b>0.634</b>	68.6	14.6
<b>1.40</b>	±0.032	1.539	±5	<b>0.728</b>	78.7	12.7
<b>1.30</b>	±0.032	1.327	±5	<b>0.844</b>	91.3	11.0
<b>1.20</b>	±0.025	1.131	±5	<b>0.990</b>	107	9.33
<b>1.10</b>	±0.025	0.9503	±6	<b>1.18</b>	128	7.84
<b>1.00</b>	±0.025	0.7854	±6	<b>1.43</b>	154	6.48
<b>0.90</b>	±0.025	0.6362	±6	<b>1.76</b>	191	5.25
<b>0.85</b>	±0.025	0.5675	±6	<b>1.97</b>	214	4.68
<b>0.80</b>	±0.020	0.5027	±6	<b>2.23</b>	241	4.15
<b>0.75</b>	±0.020	0.4418	±6	<b>2.54</b>	274	3.64
<b>0.70</b>	±0.020	0.3848	±6	<b>2.91</b>	315	3.17
<b>0.65</b>	±0.020	0.3318	±6	<b>3.38</b>	365	2.74
<b>0.60</b>	±0.020	0.2827	±6	<b>3.96</b>	429	2.33
<b>0.55</b>	±0.016	0.2376	±7	<b>4.71</b>	510	1.96
<b>0.50</b>	±0.016	0.1964	±7	<b>5.70</b>	617	1.62
<b>0.45</b>	±0.016	0.1590	±7	<b>7.04</b>	762	1.31
<b>0.40</b>	±0.016	0.1257	±7	<b>8.91</b>	965	1.04

