

Product forms and sizes

Wire

- 0.010-12 mm (0.00039-0.472 inch)
- Other sizes are available on request

Ribbon (flat wire)

- Thickness: 0.023-0.8 mm (0.0009-0.031 inch)
- Width: 0.038-4 mm (0.0015-0.157 inch)
- Width / thickness ratio: max 40, depending on alloy and tolerance
- Other sizes are available on request

Resistance Chart

80/20 Nickel Chromium Wire				
Size (SWG)	Size (mm)	Resistance (ohm/m)		
		Min	Mean	Max
20	0.914	1.578	1.661	1.744
21	0.813	1.995	2.100	2.205
22	0.711	2.608	2.745	2.883
23	0.610	3.543	3.730	3.916
24	0.559	4.219	4.441	4.663
25	0.508	5.109	5.378	5.647
26	0.457	6.313	6.645	6.977
27	0.417	7.582	7.981	8.380
28	0.376	9.326	9.817	10.307
29	0.345	11.077	11.660	12.243
30	0.315	13.287	13.987	14.686
31	0.295	15.150	15.947	16.745
32	0.274	17.561	18.486	19.410
33	0.354	10.521	11.075	11.628
34	0.234	24.078	25.346	26.613
35	0.213	29.060	30.590	32.119
36	0.193	35.395	37.258	39.121
37	0.172	44.566	46.912	49.257
38	0.152	57.065	60.069	63.072
39	0.132	75.668	79.651	83.633
40	0.122	88.581	93.243	97.905
41	0.112	101.786	110.637	118.780
42	0.102	122.722	133.394	143.212

80/20 Nickel Chromium Ribbon				
Width (mm)	Thickness (mm)	Resistance (ohm/m)		
		Min	Mean	Max
3.175	0.254	1.395	1.469	1.542
3.175	0.203	1.746	1.838	1.930
3.175	0.178	1.991	2.096	2.201
1.587	0.254	2.792	2.939	3.086
1.587	0.203	3.494	3.678	3.861
1.587	0.152	4.666	4.912	5.157
1.587	0.102	6.953	7.319	7.685
1.270	0.254	3.489	3.673	3.856
1.270	0.203	4.366	4.596	4.825
1.270	0.178	4.979	5.241	5.503
1.270	0.152	5.831	6.137	6.444
1.270	0.102	8.689	9.146	9.603
1.016	0.127	8.723	9.182	9.641
1.016	0.102	10.861	11.433	12.004
0.794	0.254	5.581	5.875	6.168
0.794	0.203	6.983	7.351	7.718
0.794	0.177	8.009	8.430	8.852
0.794	0.152	9.326	9.817	10.308
0.794	0.102	13.898	14.629	15.361
0.794	0.098	14.392	15.150	15.907
0.794	0.084	16.876	17.764	18.652
0.794	0.083	17.079	17.978	18.877
0.635	0.113	15.686	16.511	17.337
0.635	0.110	16.114	16.962	17.810

Data is based on tests performed by Ruby Mica. Users are advised to verify and ensure suitability for intended application.



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NICROLIVE<sup>TM</sup>  
NICKEL-CHROMIUM ALLOY WIRES & RIBBONS





## About Us

Established since 1968, Ruby Mica Co. Ltd. introduces its Nicrolive Series of Nickel Chromium Wires and Ribbons, well suited for electrical heating and resistance applications, worldwide.

Ruby Mica Co. Ltd. has been a long-term, heating elements manufacturer and supplier, to some of the most prestigious European catering equipment manufacturers. Hence, we take great pride in proclaiming that our Nicrolive series have stood the test of time keeping up their high quality and superior performance consistently.

Nicrolive wires & ribbons are precisely manufactured to close tolerances at our comprehensive production facilities. Automated wiredrawing machinery from Germany and a sophisticated test laboratory complements our quality-assurance initiatives.

We believe, "Sometimes getting the question right can be much more challenging than finding the right answer". Thanks to our in-house R&D cell, we can successfully analyze and understand our customer's requirement first, then design & deliver the customized heating solution to them.

So simply, go ahead and place your valuable trust in the able hands of field experts who understand electrical heating and resistance wires the best.



## Nickel Chromium – The Resistive Bunch

Nickel Chromium alloy generally comprises nickel, chromium, iron, carbon, silicon, manganese and some other trace elements in small quantities. It has relatively high electrical-resistivity and resistance to oxidation at high temperatures. It is widely used in electric heating elements, rheostats and resistance units, while its excellent corrosion-resistance properties lends itself useful to applications requiring exposure to acids and other corrosive chemicals.

**A quick fun fact to share, "We all have a bit of Nickel Chromium in our daily lives, in the form of Stainless Steel".**

## Nicrolive 80

Comprises 80% nickel and 20% chromium. Its awe-inspiring ability to quickly heat up and rapidly cool down with a mere flick of an electrical switch, makes it ideally suited to the manufacture of heating elements for electrical home appliances. Its greater resistance properties and high melting-point justify its usage as a resistor in high-temperature applications, such as high-speed fuses, electric industrial furnaces, electric ranges and radiant heaters. It can have an operating temperature up to 1150°C (2100°F). It has a long service life and demonstrates non-magnetic properties.

# NICROLIVE<sup>TM</sup>

## Nicrolive 60

Comprises 60% nickel and 16% chromium. It is the accepted material for heating-devices operating up to 1100°C (2012°F). It is used extensively in metal-cladded tubular-heating elements. It renders compact units capability to withstand severe overloads and short circuits without damage or circuit impairment. It has excellent weld-ability and demonstrates moderate magnetic properties.

## Nicrolive 40

Comprises 40% nickel and 18% chromium. Functionally it bears a close resemblance to Nicrolive 60. It can have a continuous working temperature of 300°C (572°F), finally melting away at 1100°C (2012°F). Its higher ferrous content makes it a heavy-duty wire ideal for use in heated wire-cutting applications. Apart from having high ductility, this wire also exhibits magnetic properties.