

## Alloy Wire International RW 80 Ni-Cr Resistance Wire

Category : Metal , Nonferrous Metal , Nickel Alloy

### Material Notes:

Used in heating elements and control resistors because of its electrical properties and resistance to oxidation under temperature cycling and frequent switching. Also used in hot cutting operations, line bending, band heaters, bag sealers, etc. Information provided by Alloywire International.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Alloy-Wire-International-RW-80-Ni-Cr-Resistance-Wire.php](http://www.lookpolymers.com/polymer_Alloy-Wire-International-RW-80-Ni-Cr-Resistance-Wire.php)

Physical Properties	Metric	English	Comments
Density	8.31 g/cc	0.300 lb/in <sup>3</sup>	

Thermal Properties	Metric	English	Comments
CTE, linear	12.5 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	6.94 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	
	@Temperature 20.0 - 100 $^{\circ}\text{C}$	@Temperature 68.0 - 212 $^{\circ}\text{F}$	
Maximum Service Temperature, Air	300 $^{\circ}\text{C}$	572 $^{\circ}\text{F}$	Hot Cutting or Line Bending
	1200 $^{\circ}\text{C}$	2190 $^{\circ}\text{F}$	Heating Element

Component Elements Properties	Metric	English	Comments
Chromium, Cr	20 %	20 %	
Nickel, Ni	80 %	80 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.000108 ohm-cm	0.000108 ohm-cm	
	@Temperature 20.0 $^{\circ}\text{C}$	@Temperature 68.0 $^{\circ}\text{F}$	
	0.000109 ohm-cm	0.000109 ohm-cm	Temperature resistance factor (F) =1.006
	@Temperature 100 $^{\circ}\text{C}$	@Temperature 212 $^{\circ}\text{F}$	
	0.000110 ohm-cm	0.000110 ohm-cm	Temperature resistance factor (F) =1.015
	@Temperature 200 $^{\circ}\text{C}$	@Temperature 392 $^{\circ}\text{F}$	
0.000111 ohm-cm	0.000111 ohm-cm	0.000111 ohm-cm	Temperature resistance factor (F) =1.028
	@Temperature 300 $^{\circ}\text{C}$	@Temperature 572 $^{\circ}\text{F}$	
0.000113 ohm-cm	0.000113 ohm-cm	0.000113 ohm-cm	Temperature resistance factor (F) =1.045
	@Temperature 400 $^{\circ}\text{C}$	@Temperature 752 $^{\circ}\text{F}$	

Electrical Properties	Metric	English	Comments
	0.000114 ohm-cm @Temperature 700 °C	0.000114 ohm-cm @Temperature 1290 °F	Temperature resistance factor (F) =1.057
	0.000114 ohm-cm @Temperature 800 °C	0.000114 ohm-cm @Temperature 1470 °F	Temperature resistance factor (F) =1.051
	0.000114 ohm-cm @Temperature 900 °C	0.000114 ohm-cm @Temperature 1650 °F	Temperature resistance factor (F) =1.052
	0.000115 ohm-cm @Temperature 1000 °C	0.000115 ohm-cm @Temperature 1830 °F	Temperature resistance factor (F) =1.062
	0.000115 ohm-cm @Temperature 600 °C	0.000115 ohm-cm @Temperature 1110 °F	Temperature resistance factor (F) =1.068
	0.000115 ohm-cm @Temperature 500 °C	0.000115 ohm-cm @Temperature 932 °F	Temperature resistance factor (F) =1.065
	0.000116 ohm-cm @Temperature 1100 °C	0.000116 ohm-cm @Temperature 2010 °F	Temperature resistance factor (F) =1.071
	0.000117 ohm-cm @Temperature 1200 °C	0.000117 ohm-cm @Temperature 2190 °F	Temperature resistance factor (F) =1.080

## Contact Songhan Plastic Technology Co.,Ltd.

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