

## Special Metals MONEL® Alloy 401

Category : Metal , Nonferrous Metal , Copper Alloy , Nickel Alloy , Superalloy

### Material Notes:

A copper-nickel alloy designed for specialized electrical and electronic applications. It has a very low temperature coefficient of resistance and medium-range electrical resistivity. Used for wire-wound precision resistors and bi-metal contacts. Standard product forms are strip and wire. Data provided by the manufacturer, Special Metals.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Special-Metals-MONEL-Alloy-401.php](http://www.lookpolymers.com/polymer_Special-Metals-MONEL-Alloy-401.php)

Physical Properties	Metric	English	Comments
Density	8.89 g/cc	0.321 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	441 MPa	64000 psi	Annealed
Tensile Strength, Yield	134 MPa @Strain 0.200 %	19400 psi @Strain 0.200 %	Annealed
Elongation at Break	51 %	51 %	Annealed

Thermal Properties	Metric	English	Comments
CTE, linear	13.7 Åµm/m-Å°C @Temperature 20.0 - 100 Å°C	7.61 Åµin/in-Å°F @Temperature 68.0 - 212 Å°F	
Thermal Conductivity	19.2 W/m-K	133 BTU-in/hr-ftÅ²-Å°F	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.10 %	<= 0.10 %	
Copper, Cu	54 %	54 %	As remainder
Iron, Fe	<= 0.75 %	<= 0.75 %	
Manganese, Mn	<= 2.25 %	<= 2.25 %	
Nickel, Ni	40 - 45 %	40 - 45 %	Including Cobalt
Silicon, Si	<= 0.25 %	<= 0.25 %	
Sulfur, S	<= 0.015 %	<= 0.015 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000489 ohm-cm	0.0000489 ohm-cm	Temperature coefficient of resistance is +/-36 $\mu\text{Ohm/Ohm-}^{\circ}\text{C}$ in the range 25-150 $^{\circ}\text{C}$ .
Curie Temperature	$\leq -196^{\circ}\text{C}$	$\leq -321^{\circ}\text{F}$	

## Contact Songhan Plastic Technology Co.,Ltd.

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