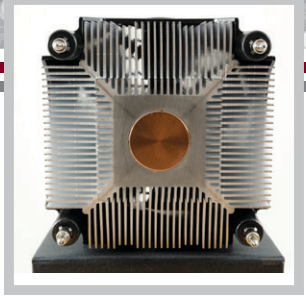
OFHC COPPER 101/102



CHEMICAL COMPOSITION %	
Copper 101 Alloy	**Copper 102 Alloy**
Cu: 99.99% minimum Oxygen: .001 max	Cu: 99.95% minimum Oxygen: .001 max
MECHANICAL PROPERTIES	
Property	**Copper 101/102 Alloy**
Density	(lbs. per cu. in): .322
Module of Elasticity	(x 10^{-6} PSI, tension): 17
Electrical Conductivity	(% IACS at 68°F (20°C) as annealed): 101
Thermal Conductivity	(BTU per sq.ft.per ft.per hr.per F at 68°F, (20°C): 226
PHYSICAL PROPERTIES	
Property	**Copper 101/102 Alloy**
Tensile Strength **Yield Strength (0.2% Offset)** [x 1000 PSI (MPA = KSI x 6.8948)]	
Annealed: 26 – 38	8 – 14
1/2 Hard: 37 – 46	30 – 44
Full Hard: 43 – 52	41 – 50
Spring: 50 – 58	48 – 57
Elongation [% in 2 Inches (= % In 50mm)]	
Annealed: 20 – 50	
1/2 Hard: 8 – 32	
Full Hard: 3 – 16	
Spring: 2 – 4	
Rockwell B Hardness	
1/2 Hard: 77 – 89	
Full Hard: 86 – 93	
Spring: 91 – 97	
Linear coefficient of thermal expansion cm. per cm. per °C x 10^{-6}	
Temp. range – °C	**Copper 101/102 Alloy**
20-300	9.8

Copper 101 and 102 fall under the electronic grade alloy family known for their high thermal and electrical conductivity and ability to protect against corrosion. These alloys are ductile and malleable. The corrosion resistant property of Copper Alloys makes them an important application to both indoor and outdoor architectural features. These alloys corrode at slim rates while affected by the outdoor elements such as pollution, water, acids, and organic chemicals

Copper Alloys possess malleable properties that allow them to produce microscopic wire with softening anneals. Copper Alloys are utilized with the following techniques to create bathroom fixtures and other household products: deep drawing, coining, stretching, and bending. Copper 101 and 102 can be easily joined by utilizing soldering, brazing, welding, and bolting. Copper Alloys are normally welded to be a vital component in heat exchangers and air-conditioning units. It is critical to consider joint area annealing and expansion during the copper alloy welding process. Copper Alloys are heated to high temperatures or pressured to fuse metals together with another filler material through welding.

Copper Alloys can be worked in hot and color temperatures. Copper Alloys break down the dendritic solidification in castings during hot working. After this initial step, the components can be hot forged or machined. Through the process of extrusion, Copper Alloys are utilized in tubes in order to carry hydraulic fluids and refrigerants. Extrusion heats the casting above the alloy's recrystallization temperatures; afterwards, the materials are submerged in a shaped die. Copper Aloys are then incorporated to create a finish on the materials (please note that thickness is reduced after the addition of copper).

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OFHC COPPER 101/102

OFHC COPPER

ASTM B 152 • CDA 101 or CDA 102

Thick.		Width		
.005”	x	12”	x	Coil
.010”	x	12”	x	Coil
.015”	x	12”	x	Coil
.020”	x	12”	x	Coil
.030”	x	12”	x	Coil

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National Electronic Alloys stocks the highest quality alloys for industry.

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- 49 Alloy
- 52 Alloy
- Nickel 200/201/205/233
- Magnetic Shielding Alloys
- OFHC Copper 101/102
- 1010 Carbon Steel
- 301 Stainless Steel
- 302/304 Stainless Steel
- 316/316L Stainless Steel
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