ELECTRONIC APPLICATIONS

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SUPPORTING YOUR SUCCESS

NICKEL ALLOYS WITH HIGH ELECTRICAL CONDUCTIVITY

Commercially pure nickel is available in several grades with slightly different compositions to meet special needs. Electronic grade alloys have excellent mechanical properties, generally have high thermal and electrical conductivity and are highly resistant to corrosion. These alloys are often used for electronic applications in anodes, lead wires, fuel cells, battery casings, packaging and lids.

Commercially pure nickel contains only traces of minor elements, has good mechanical properties and excellent resistance to many corrosive environments. More importantly for electronic applications nickel has high thermal and electrical conductivities.

Alloy 36 is a binary nickel-iron alloy which has a very low room temperature thermal expansion coefficient making it very useful in precision components in electronic systems such as can be found in telescopes and laser applications.

If you would like to know more about these and other alloys for electronic applications, please contact us via info@bibusmetals.com.

ALLOY PROPERTIES

	Composition (%)	Key attributes	Application
Alloy 200 N02200 2.4060	99.6Ni – 0.04 C	A general purpose grade with good strength and toughness at elevated and sub zero temperatures	Used for leads and terminals, support wires and in magnetostrictive devices such as transducers. Also used in fuel cells and battery plates
Alloy 201 N02201 2.4061	99.6Ni – 0.02C max	A low carbon variant of Nickel 200 with a low work hardening rate	As above. Ideally suited to forming by deep drawing, etching and spinning
Alloy 270 N02270 2.4050	99.97Ni	A very high purity (99.97 % Ni) grade of nickel made by a powder metallurgy process. High purity results in lower coefficient of expansion and electrical resistivity and is also very ductile.	Used for electrical resistance thermometers due to its high temperature coefficient of resistance and as a substrate for precious metal cladding (spatter targets)
Alloy 36 K93600 1.3912	36Ni – 64Fe	A binary nickel-iron alloy with a very low room temperature thermal expansion coefficient	Finds application in electronic and optical support systems in telescopes and for laser components

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