

## NICKEL ALLOYS QUICK REFERENCE GUIDE

### Nickel

Commercially pure or low-alloy nickel has characteristics that are useful in several fields, notably chemical processing and electronics. Nickel is highly resistant to various reducing chemicals and is unexcelled in resistance to caustic alkalis. Because of its corrosion resistance, nickel is used to maintain product purity in the processing of foods and synthetic fibers. Compared with nickel alloys, commercially pure nickel has high electrical conductivity. It also has a high Curie temperature and good magnetostrictive properties. Typical electrical/electronic applications are lead wires, battery components, thyratrons, magnetostrictive transducers, and sparking electrodes. As with electrical conductivity, thermal conductivity of nickel is relatively high and is a reason the metal is frequently used for heat exchangers.

Annealed nickel has a low hardness and good ductility and malleability. Those attributes, combined with good weldability, make the metal highly fabricable. Nickel has a relatively low work-hardening rate, but it can be cold-worked to moderately high strength levels while maintaining ductility. The latter characteristics make nickel a useful material for precious-metal cladding.

NICKEL	UNS
200	N02200
201	N02201
211	N02211