



Grade	Code	UNS	Nickel Alloys
Monel 400	2.4360	N04400	

Nickel Alloy Properties

Monel 400 (UNS N04400) offers excellent corrosion resistance in a variety of environments. Corrosion rates are low, particularly in rapidly flowing brackish or seawater. The product also provides excellent resistance to stress-corrosion cracking in freshwater. Monel 400 is a solid-solution alloy which can be hardened by cold working. The product promotes attractive performance characteristics, including good weldability and high strength and retains its properties at sub zero temperatures. The material is also suitable for use in high-temperature environments up to 538° C. Due to the alloys copper content, Monel 400 is a viable, low cost alternative when compared to commercially pure nickel.

Chemical Composition (Monel 400)

Ni+Co %	Cr %	C %	S %	Mn %	Si %	Al %	Ti %	Cu %	Fe %
Balance	-	0,30 max.	0,024 max.	2,00 max.	0,50 max.	-	-	28,00 – 24,00	-

Mechanical Properties (Annealed)

Product Form	Rp0.2, Mpa	Rm, Mpa	Elongation [%]	Hardness[HRB]	Density [g/cm ³]
Rod & Bar	172-345	517-620	60-35	60-80	8,8

Suitable For

Common applications of Alloy 400 are: Feedwater and steam generator tubes in power plants, Brine heater and recompression evaporator in saltworks, Sulfuric and hydrofluoric acid alkylation, Heat exchangers in the chemical industry, Plating components for mineral oil distillation plants, Splash zone lining on offshore platforms, Impellers and pump shafts in marine technology, Refining plants for the production of nuclear fuel, Pumps and valves in production lines for tetrachlorethylene (perchloroethylene) and chlorinated plastics, Heating tubes for monoethanolamine (MEA), Sour-gas resistant components for oil and gas production .

Remarks

Specification

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Norm

ASTM B127, B164, B564, AMS 4544, 4675, ISO 15156:2003, API 5LD, NACE MR0175