

Group	Alloy UNS / W.NR.	Description	Industry		Applications
Ni	Alloy 200/201 N02200 & N02201 2.4060/2.4066 & 2.4061/2.4068	Nickel 200 and Nickel 201 are solid solution strengthened, commercially pure wrought alloys. The elemental restrictions of both alloys are combined into one, dual-certified chemistry, resulting in a single alloy with the desired characteristics of both alloys.	Aerospace Chemical Process Electronics	Navy/Marine Petrochemical Power Generation	Typical applications where Nickel 200/201 is used include electronic and electroplating components, caustic evaporators, food processing equipment, caustic handling and storage equipment, synthetic fiber production, salt production and other processes where sodium hydroxide and fluorine are used.
Ni-Cu	Alloy 400 N04400 2.4360 & 2.4361	Alloy 400 is a single phase, solid-solution nickel-copper alloy that offers superior resistance to many corrosive environments over temperatures ranging from sub-zero to 800°F.	Aerospace Agriculture Chemical Process Food/Beverage Mining	Navy/Marine Oil/Gas Pharmaceutical Pulp/Paper	Typical applications include pumps and valves, propeller shafts, marine fixtures and fasteners, electronic components, springs, chemical processing equipment, fresh and salt water tanks, process vessels and piping, boiler feedwater heaters and other heat exchangers.
	Alloy 405 N04405 2.4363	Alloy 405 is a nickel-copper alloy that is an enhanced machining version of alloy 400. A controlled amount of sulfur is added to improve machinability.	Aerospace Chemical Process Navy/Marine	Oil/Gas Pollution Control	Applications include screw-machine products, water meter and valve seat components, fittings and fasteners.
	Alloy K500 N05500 2.4375	Alloy K-500 is a precipitation hardenable, nickel-copper alloy. It has similar corrosion resistance to that of alloy 400, with the additional advantage of greater strength and hardness. The increase in mechanical properties is attributed to an additional aging heat treatment and its effect on the elements alloyed into the material.	Chemical Process Electronics Food Processing Navy/Marine	Oil/Gas Pharmaceutical Pulp/Paper	Used heavily in the marine and oil & gas industries, but end use applications span many other industries. Alloy K500 is typically used as pump shafts, impellers, springs, fasteners, valve trim, oil well drill collars and as doctor blades or scrapers in pulp and paper production.
Ni-Cr-Fe	Alloy 600 N06600 2.4816	Alloy 600 is a nickel-chromium-iron, solid solution strengthened alloy used for applications that require corrosion and elevated temperature resistance.	Aerospace Automotive Chemical Process	Heat Treatment Navy/Marine Nuclear	Chemical process industry applications include heaters, condensers and trays. Heat-treat industry applications include muffles, retorts, baskets and other furnace fixtures. Aerospace industry applications include exhaust liners, turbine seals and air-frame components. Alloy 600 is also used in the nuclear industry because of its resistance to corrosion in high purity water.
Ni-Cr-Mo	Alloy 22 N06022 2.4602	Alloy 22 is a fully austenitic, nickel-chromium-molybdenum-tungsten alloy with better overall corrosion resistance compared to other nickel-chromium-molybdenum alloys, including alloy C-276, alloy C-4 and alloy 625 intergranular attack and stress-corrosion cracking in aggressive chemical environments.	Chemical Process Food Processing Nuclear Oil/Gas	Pharmaceutical Pollution Control Pulp/Paper Waste Water	End use applications for alloy 22 include waste incinerators, equipment for flue-gas desulfurization scrubbers, nuclear fuel reprocessing and spent fuel containers, pickling systems, heat exchanger components, equipment for chemical manufacturing and flow meters. Other uses for this alloy include sanitary applications in the pharmaceutical production industry.
	Alloy 625 N06625 2.4856	Alloy 625 is a nickel-chromium-molybdenum alloy that is used for its high strength, high toughness, and excellent corrosion resistance. This nickel-based alloy can be used in the solution annealed condition for higher temperature resistance and in the annealed condition for higher strength. Alloy 625 offers good weldability and ease of fabrication.	Aerospace Automotive Chemical Process	Navy/Marine Nuclear Oil/Gas	This versatile alloy is used in the marine, aerospace, chemical processing, waste management, air pollution and nuclear industries. Some end use applications include aircraft engine and airframe components, ship and submarine parts, exhaust ducts, tubing and piping, instrumentation components, heat exchangers and other processing vessels as well as nuclear reactor components.
Ni-Mo-Cr	Alloy C276 N10276 2.4819	Alloy C-276 is a solid solution strengthened nickel-molybdenum-chromium alloy with a small amount of tungsten. Alloy C-276 exhibits excellent corrosion resistance in a variety of harsh environments and media.	Chemical Process Navy/Marine Oil/Gas Petrochemical	Pharmaceutical Power Generation Pulp/Paper Waste Water	End use applications include stack liners, ducts, dampers, scrubbers, stack gas reheaters, heat exchangers, reaction vessels, evaporators, transfer piping and many other highly corrosive applications.

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Ni-Mo	Alloy B-2 N10665 2.4617	Alloy B-2 is a solid solution strengthened, nickel-molybdenum alloy typically used in extreme reducing conditions. Alloy B-2 has significantly lower carbon, silicon and iron compared to the predecessor, alloy B (UNS N10001).	Agriculture Chemical Process	Heat Exchanger Petrochemical	Typical end use applications include pumps, valves, mechanical seals, rupture discs, flanges, fittings, tanks and vessels.
	Alloy B-3® N10675 2.4600	Similar to Alloy B-2 with additional minor chemical additions for enhanced machined and welding qualities.	Agriculture Chemical Process	Heat Treatment Petrochemical	Typical end use applications include pumps, valves, mechanical seals, rupture discs, flanges, fittings, tanks and vessels.
Fe-Ni-Cr	Alloy 800H/HT® N08810 & N08811 1.4958 & 1.4959	Alloy 800H/800HT® are two individual solid solution strengthened, iron-nickel-chromium alloys. The principle difference between alloys 800H and 800HT® is the restricted aluminum and titanium content in 800HT®, which results in higher creep and stress rupture properties.	Chemical Process Heat Treatment	Petrochemical Power Generation	Typical applications include superheater and reheater tubing, headers, pigtails, outlet manifolds and sheathing for heating elements.
Ni-Fe-Cr-Mo	Alloy 20 N08020 2.4660	Alloy 20 is a nickel-iron-chromium based, austenitic alloy with excellent corrosion resistance in chemical environments containing sulfuric acid and many other aggressive media.	Chemical Process Food Processing Navy/Marine	Petrochemical Pharmaceutical Refining	End use applications include storage tanks, mixing tanks, agitators, pump and valve parts, food processing equipment, fasteners and fittings.
Titanium	Alloy Ti Gr 2 R50400 3.7034 & 3.7035	Titanium is light weight, exceptionally corrosion resistant and often exceeds the corrosion resistance of stainless steels in most environments.	Aerospace Automotive Chemical Process	Desalination Navy/Marine Pharmaceutical	Typical applications for Grade 2 titanium include oil & gas components, reaction and pressure vessels, tubing or piping systems, heat exchangers, liners, flue-gas desulphurization systems and many other industrial components.
	Alloy Ti Gr 5 R56400 3.7164 & 3.7165	Similar to Ti Gr2 with alloying elements adding additional strength and ductility.	Aerospace Automotive Chemical Process	Desalination Navy/Marine Pharmaceutical	Used extensively for turbine engines, aircraft engine components including discs, blades, wheels.
Cobalt	Alloy 6B R30016	Alloy 6B is a cobalt-based alloy with great wear, erosion and abrasion resistance.	Mining Oil/Gas Power Generation		Alloy 6B is used in applications where erosion is an issue such as nozzles, pumps, valves and mixing blades that are moving slurries where cavitation damage is a concern. This alloy has also found use in industrial sliding wear applications such as valves in chemical processing and turbine blade components for steam control in the power industry. Alloy 6B can also be found in bearing assemblies in heat treat furnaces.
Duplex Stainless Steel	Alloy F255 S32550 1.4507	Alloy F255 is a highly alloyed, super duplex (ferrite-austenite) solid solution strengthened alloy, which provides high strength and wear resistance while offering superior corrosion resistance compared to 316 stainless steel.	Chemical Process Flue Gas Desulfurization Navy/Marine	Nuclear Oil/Gas Pulp/Paper	Alloy F255 can be a cost effective option for many applications, including oil & gas industry sub-sea equipment, chemical process industry equipment, pollution control scrubbers, marine seals, pumps and valves, bolts and fasteners, grain and vegetable processing equipment, pulp and paper bleaching components, water and sewage treatment and desalination equipment.