



Special Alloy Datasheet

Shaanxi Jiade Group Co Ltd — alloyworld.cn

Nickel and nickel copper alloys including Inconel 600 and 625, Monel 400 and K500, Hastelloy C-276 and G30, Nickel 200 and 201, plus 904L and flanges.

Capability

- Nine nickel and nickel copper grades held in one supply programme
- Pipe, plate, bar, fittings, flanges, fasteners and wire in the same grade
- PED approved supply on the Nickel 200 and 201 programme
- Stock deliveries on Monel K500 in about 7 to 10 days
- ASTM, ASME, DIN, ISO and VdTUV specifications supported

Problems This Category Solves

- Stainless piping and vessels that pit or thin within months in aggressive media
- Weld heat affected zone attack in nickel alloy fabrications
- Parts that cannot be strengthened by heat treatment after fabrication
- Long mill lead times on small quantities of specialist alloy

Products and Specifications

Nickel 200 Seamless Pipe

Standard	ASTM B161
Grade	Nickel 200, UNS N02200
Companion Grade	Nickel 201, UNS N02201
Size Range	1/8 inch to 30 inch
Construction	Seamless, welded or electric resistance welded
Density	8.9 g per cubic centimetre
Approval	PED approved supply
Origin	Xi'an, Shaanxi, China

Nickel Alloy 625 Exhaust Tubing

Standard	ASTM B444, ASME SB444, BS 3074 NA21, DIN 2.4856
Grade	Inconel 625, UNS N06625
Seamless Tubing Size	1/2 inch to 12 inch OD
Seamless Outside Diameter	3.00 to 219.10 mm
Seamless Wall Thickness	0.40 to 12.70 mm
Welded Tubing Size	1/2 inch to 12 inch OD
Welded Outside Diameter	6.35 to 114.3 mm
Welded Wall Thickness	0.8 to 12.7 mm
Gauge	25 SWG to 10 SWG

Length	Single random, double random and cut length
Delivery Condition	Grade 1 annealed, Grade 2 solution annealed
Density	8.4 g per cubic centimetre
Sample Size Held	113.60 mm OD x 6 mm wall seamless

SS316 Equal Angle Bar 75 x 75 x 6 mm x 6 m

Standard	JIS, AISI, ASTM
Grade	Stainless steel 316
Model Number	316
Type	Equal angle bar
Section	75 x 75 x 6 mm
Standard Length	6 m, or to your request
Thickness Tolerance	plus minus 0.02 mm
Application	Chemical industry, metallurgy, water
Place of Origin	Shaanxi, China
Packing	To customer requirement or export standard
Delivery	7 to 20 days after confirmation

Monel Alloy K500

Grade	Monel Alloy K500
Alloy Family	Nickel copper superalloy
Product Forms	Coils, sheets, strips, plates, round bars, pipe fittings, flanges, fasteners, valves, angles, channels
Delivery from Stock	About 7 to 10 days
Typical Applications	Fasteners, pump shafts, valves, marine equipment

Nickel Alloy 200 and 201

Grade	Nickel Alloy 200 and 201
Nickel 200 Designation	UNS N02200, W.Nr. 2.4060, 2.4066
Nickel 201 Designation	UNS N02201, W.Nr. 2.4061, 2.4068
Purity	99.6 percent commercially pure wrought nickel
Rod and Bar	ASTM B160, ASME SB160, DIN 17752, ISO 9723, VdTUV 345
Fittings	ASTM B366, ASME SB366
Forgings	ISO 9725, DIN 17754
Chemical Composition	DIN 17740
Wire	DIN 17753, ISO 9724

Stainless Steel Flange DN15 to DN1200

Size	DN15 to DN1200
Standard	GB, ASTM, JIS, EN, DIN
Pressure Class	150, 300, 600, 900, 1500
Flange Types	PL, SO, WN, BL, TH
Materials	ASTM A182 F304, 304L, F316, 316L, 904L, 2205, 2507, 1Cr18Ni9Ti, 0Cr18Ni9Ti, 321, 18-8
Bolt Hole Centre Circle Diameter	50 mm to 2130 mm
Bolt Hole Diameter	11 mm to 30 mm
Number of Bolt Holes	4 to 48

Thread	M10 to M27
Flange Thickness	12 mm to 58 mm
Unit Weight Range	0.36 kg to 234.6 kg

904L Stainless Steel Plate

Grade	904L, N08904, 1.4539
Thickness	0.3 mm to 350 mm
Length	As required
Rolling Condition	Hot rolled, cold rolled, fine rolled
Carbon	0.03 percent maximum
Silicon	1.00 percent maximum
Manganese	2.00 percent maximum
Phosphorus	0.03 percent maximum
Sulphur	0.03 percent maximum
Nickel	23.0 to 25.0 percent
Chromium	18.0 to 20.0 percent
Molybdenum	3.0 to 4.0 percent
Copper	4.0 to 5.0 percent
Yield Strength Rp0.2	216 N per square millimetre
Tensile Strength Rm	490 N per square millimetre
Elongation A5	35 percent
Density	8.24 g per cubic centimetre
Shipping	Sea freight supported

904L Stainless Steel Bar

Standard	ASTM A276, ASTM A182, ASME SA-182
Grade	904L
Round Bar Diameter	3 mm to 800 mm
Square Bar Size	4 x 4 mm to 100 x 100 mm
Flat Bar Thickness	2 mm to 100 mm
Flat Bar Width	10 mm to 500 mm
Hexagonal Bar Size	2 mm to 100 mm
Length	6 m or customised
Certificate	ISO 9001, third party inspection by SGS or BV

Hastelloy G30 Alloy N06030

Grade	Hastelloy G30, Alloy N06030
Technical Standard	ASTM B366, B581, B582, B619, B622
Product Forms	Pipes, plates, bar, fittings
Nickel	About 37 percent
Chromium	28 to 31.5 percent
Molybdenum	4.0 to 6.0 percent
Copper	1.0 to 2.4 percent
Manganese	1.5 percent maximum

Hastelloy C-276 Alloy N10276

Grade	Hastelloy C-276, UNS N10276
Alloy Family	Nickel molybdenum chromium alloy with tungsten
Key Resistance	Wet chlorine gas, hypochlorite, chlorine dioxide solution
Chloride Service	High concentration chloride solutions including ferric chloride and copper chloride
Carbon	Low carbon content to minimise carbide precipitation

Inconel 625 Alloy N06625

Grade	Inconel 625, UNS N06625
Alloy Family	Nickel chromium molybdenum alloy with niobium
Strengthening	Niobium with aluminium, no separate heat treatment required
Key Resistance	Pitting and crevice corrosion
Typical Sectors	Chemical, aviation, marine engineering, pollution control, nuclear reactors

Inconel 600 Alloy N06600

Grade	Inconel 600, UNS N06600
Nickel	72.0 percent minimum
Chromium	14.0 to 17.0 percent
Iron	6.0 to 10.0 percent
Carbon	0.15 percent maximum
Silicon	0.5 percent maximum
Manganese	1.0 percent maximum
Copper	0.5 percent maximum
Density	8.47 g per cubic centimetre
Product Forms	Pipe, plate, strip, round bar, flat bar, forgings, wire, profile, extruded parts

Monel 400 Alloy N04400

Grade	Monel 400, UNS N04400
Alloy Family	Nickel copper alloy
Nickel	63.0 percent minimum
Copper	28.0 to 34.0 percent
Iron	2.5 percent maximum
Manganese	2.0 percent maximum
Carbon	0.3 percent maximum
Silicon	0.5 percent maximum
Sulphur	0.024 percent maximum
Product Forms	Pipe, plate, strip, round bar, wire, profile
Media Resistance	Seawater, hydrofluoric acid, sulphuric acid, alkali

Frequently Asked Questions

Which nickel alloy should I use for wet chlorine

Hastelloy C-276. It is one of the few materials that withstands wet chlorine gas, hypochlorite and chlorine dioxide solution, and its high molybdenum content makes it resistant to pitting and crevice attack.

What is the difference between Hastelloy and Monel

Monel is a nickel copper alloy that suits alkali media, hydrofluoric and sulphuric acid, and marine service, with copper giving some biofouling resistance. Hastelloy resists a wider set of acidic solutions including nitric, hydrochloric and chromic acid, and adding chromium improves its oxidation resistance.

Why is Monel usually more expensive than Hastelloy

Most Monel alloys contain 60 to 70 percent nickel, while Hastelloy contains less nickel alongside iron and chromium. Nickel is a volatile commodity, so the higher nickel content pushes the Monel price up.

Do you supply nickel alloy fittings and flanges to match the pipe

Yes. Pipe, plate, bar, fittings, flanges, fasteners and wire are produced in the same grades so a whole circuit can come from one programme.

Is the nickel material PED approved

PED approved Nickel 200 seamless pipe and Nickel 201 welded tube are supplied on request, and PED documentation is also available on the 316L bar programme.

How quickly can special alloys ship

Monel K500 ships from stock in about 7 to 10 days. Other grades are quoted against the size, form and quantity you need.