



Choose the right alloy in one page.

Nominal published properties. Certified heat lots ship with actual MTC values (EN 10204 3.1).

GRADE SELECTION MATRIX

Monel 400	N04400	66 Ni · 31 Cu	240 / 550	~480 °C	Seawater, HF acid	★★
Monel K-500	N05500	66 Ni · 29 Cu · Al/Ti	690 / 965	~480 °C	Pump shafts, fasteners	★★★
Inconel 600	N06600	72 Ni · 15 Cr	240 / 655	1095 °C	Furnaces, oxidation	★★
Inconel 625	N06625	61 Ni · 21 Cr · 9 Mo · Nb	414 / 827	982 °C	Subsea, marine, aero	★★★★
Inconel 718	N07718	53 Ni · 19 Cr · Nb	1035 / 1240	700 °C	Turbines, aerospace	★★★
Incoloy 800/800H	N08800/10	32 Ni · 21 Cr	205 / 520	1100 °C	Furnace, petrochem	★★
Incoloy 825	N08825	42 Ni · 21 Cr · 3 Mo · Cu	241 / 586	540 °C	Sulfuric, phosphoric	★★★
Hastelloy C-276	N10276	57 Ni · 16 Mo · 16 Cr · W	355 / 790	1040 °C	Worst-case chemical	★★★★★
Hastelloy C-22	N06022	56 Ni · 13 Mo · 22 Cr	355 / 760	1040 °C	Chloride streams	★★★★★
Hastelloy B-3	N10675	68 Ni · 28 Mo	417 / 895	—	Reducing acids (HCl)	★★★
316L (ref)	S31603	10 Ni · 17 Cr · 2 Mo	205 / 515	425 °C	Mild service only	★

ENVIRONMENT → ALLOY SHORTCUT

Chloride pitting / crevice	Hastelloy C-276 or C-22 (PREN ≈ 68), then Inconel 625 (≈ 51)
Seawater, brine	Monel 400, Inconel 625
Sulfuric / phosphoric acid	Incoloy 825, Hastelloy G-30
Hydrochloric acid (reducing)	Hastelloy B-2 / B-3
High temperature > 700 °C	Inconel 600/601/617, Incoloy 800H
High strength + corrosion	Inconel 625, 718, Monel K-500
Budget-sensitive mild service	316L — but check the environment twice

* Qualitative corrosion-resistance guidance. Final grade selection must be confirmed against your actual medium, temperature and pressure.
Free grade-selection advice: info@truegrademetals.com · +86-519-81809659 · WhatsApp — reply within 24 hours.



Forms, standards & how to specify.

PRODUCT FORMS & GOVERNING STANDARDS

Seamless pipe & tube	ASTM B444 · B163 · B165 · B167 · B407 · B423 · B622 · B829
Welded pipe & tube	ASTM B705 · B775 · B704 · B751 · B515 · B626
Capillary / coil tube	Per drawing; bright annealed available
Fittings (elbow, tee, reducer, cap)	ASTM B366
Flanges	ASTM B564 · B462
Round / flat / square / hex bar	ASTM B446 · B164 · B166 · B408 · B425 · B574
Sheet, plate, strip & coil	ASTM B443 · B168 · B409 · B424 · B575
Wire, wire rod, filler & electrode	AWS A5.14 (ERNiCrMo-3) · AWS A5.11 (ENiCrMo-3)
Forgings (rings, discs, blocks)	ASTM B564 · drawing-based

What to put in your RFQ (the 5-line spec)

1. Grade — e.g. Inconel 625 (UNS N06625), or describe your medium and we recommend
2. Form — seamless pipe, fitting, bar, sheet, wire...
3. Dimensions — OD × WT × length / diameter / thickness × width
4. Quantity — kg or pieces (no MOQ on stocked grades; 50 kg trial lots)
5. Standard & certificate — e.g. ASTM B444, MTC EN 10204 3.1 (3.2 on request)

Get a certified quote in 24 hours

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