



WISINE Fasteners & Metal Supply

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Material Review Support Document

Stainless Steel / Nickel Alloy Comparison Sheet

Material Family Review for RFQ Preparation

Next Step

Send Drawing for Quote | Prepare Material RFQ Details

Important Disclaimer

This sheet is for RFQ preparation and material-family comparison only. It does not approve material substitution or final material selection.

Final selection should be reviewed according to drawing, standard, service environment, certificate requirement, and application.

Material Family Comparison Table

Stainless steel

Common Examples: 304, 316, 316L, 904L

Typical RFQ Use Cases: Fasteners, hardware, bars, plates, tubes, machined parts

Corrosion Review Factors: Chloride exposure, outdoor environment, chemical contact, surface finish

Temperature Review Factors: Confirm service temperature if specified

Strength / Heat Treatment Review Factors: Grade and condition should be confirmed; some grades may require additional review

Certificate Considerations: EN10204 3.1 or project certificate requirement should be stated before quotation

Drawing / Standard Requirements: Confirm ASTM, EN, ISO, DIN, drawing, or project specification

Quotation Notes: Material form and availability should be confirmed by grade, size, quantity, and document needs.

Duplex stainless steel

Common Examples: Duplex 2205

Typical RFQ Use Cases: Fasteners, anchors, bars, plates, project components

Corrosion Review Factors: Chloride environment, marine-adjacent use, corrosion risk

Temperature Review Factors: Confirm project temperature requirements

Strength / Heat Treatment Review Factors: Strength and corrosion balance should be reviewed according to standard

Certificate Considerations: Certificate and traceability requirements should be stated before quotation

Drawing / Standard Requirements: Confirm UNS / EN / ASTM designation and project requirement

Quotation Notes: Duplex should not be treated as interchangeable with other stainless grades without review.

Super duplex stainless steel

Common Examples: Super Duplex 2507

Typical RFQ Use Cases: Demanding corrosion environments and project-specified parts

Corrosion Review Factors: Chloride, seawater-adjacent, chemical, or high-corrosion service should be reviewed

Temperature Review Factors: Confirm temperature and service condition

Strength / Heat Treatment Review Factors: Higher strength and grade-specific requirements should be checked

Certificate Considerations: Certificate and inspection requirements may affect quotation review

Drawing / Standard Requirements: Confirm grade, drawing, product form, and applicable standard

Quotation Notes: Super duplex selection should follow project specification and engineering review.

Nickel alloys

Common Examples: Inconel 625, Inconel 718, Hastelloy C276, Monel 400

Typical RFQ Use Cases: Corrosion-related, temperature-related, equipment, fastener, and custom part RFQs

Corrosion Review Factors: Chemical service, corrosion media, chloride, acids, or other project environment should be reviewed

Temperature Review Factors: Confirm high-temperature or temperature-cycle requirements when applicable

Strength / Heat Treatment Review Factors: Grade, condition, and mechanical requirements should be reviewed

Certificate Considerations: Certificate type, MTC, and traceability should be confirmed

Drawing / Standard Requirements: Confirm grade, standard, drawing, dimensions, and inspection scope
Quotation Notes: Nickel alloys should not be selected only by trade name without project review.

Precipitation hardening stainless steel

Common Examples: 17-4PH / SUS630
Typical RFQ Use Cases: Fasteners, shafts, machined parts, precision components
Corrosion Review Factors: Corrosion environment should be reviewed against grade and condition
Temperature Review Factors: Confirm operating temperature if specified
Strength / Heat Treatment Review Factors: Heat treatment condition is important and should be stated clearly
Certificate Considerations: Certificate and heat treatment records may be required by project documents
Drawing / Standard Requirements: Confirm grade, condition, drawing, dimensions, and inspection needs
Quotation Notes: PH stainless grades depend heavily on condition and project specification.

Titanium / special metals

Common Examples: Titanium grades, zirconium, tantalum, molybdenum, tungsten, niobium
Typical RFQ Use Cases: Drawing-based parts, special metal RFQs, lightweight or project-specified applications
Corrosion Review Factors: Application environment and chemical exposure should be reviewed carefully
Temperature Review Factors: Temperature requirement should be confirmed where relevant
Strength / Heat Treatment Review Factors: Grade, condition, and product form should be reviewed
Certificate Considerations: Certificate availability should be confirmed before quotation
Drawing / Standard Requirements: Confirm grade, standard, product form, drawing, quantity, and certificate need
Quotation Notes: Special metal availability and feasibility should be reviewed before quotation.

Common Grade Examples

The following examples are material references for RFQ preparation only. They do not imply direct equivalence or substitution:

- 304 / 316 / 316L
- 904L
- Duplex 2205
- Super Duplex 2507
- Inconel 625
- Inconel 718
- Hastelloy C276
- Monel 400
- 17-4PH / SUS630

When to Request Technical Review

Request technical review when the RFQ involves:

- Chloride environment
- Chemical service
- High temperature
- Low temperature
- Strength requirement
- Heat treatment condition
- Certificate requirement

- Drawing requirement
- Project-specific approval or inspection requirement
- Material substitution discussion