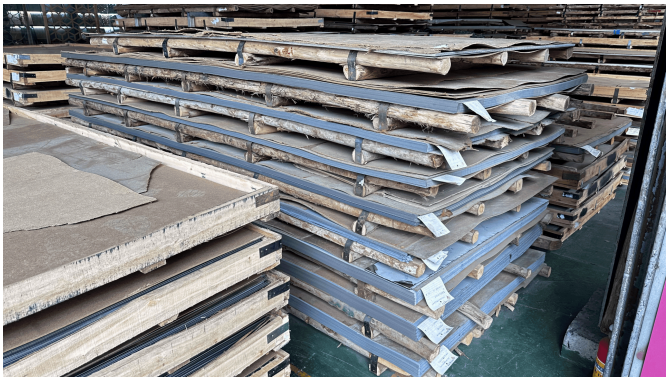
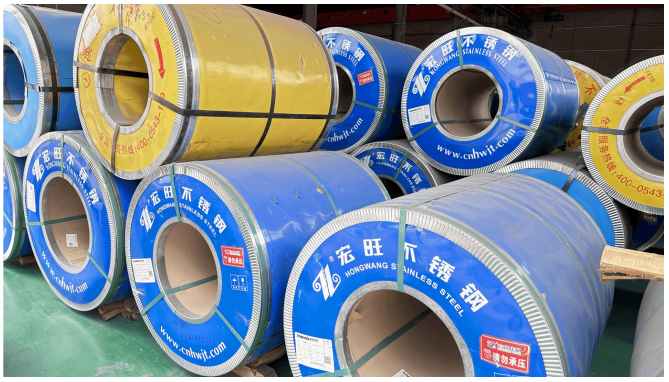
Commercial Proposal for Supply

Stainless Steel Sheet and Plate for Food-Grade and Chemical-Resistant Applications



TIG/MIG welding of AISI 304 and AISI 316



Stainless steel for HoReCa food processing equipment

Introduction

Stainless steel sheet and plate represent the most demanded product category in B2B procurement for the food processing, chemical, pharmaceutical, and HoReCa sectors. Depending on the manufacturing process, cold-rolled (CR) and hot-rolled (HR) products are distinguished, each with specific application areas and surface characteristics. Surface finish selection is critical for both functional performance and regulatory compliance in food-contact and pharmaceutical environments.

Supply Chain Pain Points and Solutions

Pain Point 1: Incorrect Surface Finish Selection. Buyers frequently order mirror-finish BA sheet for industrial reactors where matte 2B finish is required for superior coating adhesion. Conversely, matte sheet is sometimes specified for decorative restaurant facades where aesthetic requirements demand polished or patterned surfaces.

Solution: Metal-Asia.pw provides technical consultation on surface finish selection: 2B (matte, Ra 0.3-0.5 micrometers) for industrial equipment and tanks; BA (bright annealed, mirror-like, Ra <0.2 micrometers) for decorative and medical applications; No.4 (brushed unidirectional) for architectural and elevator panels; HL (hairline) for premium decorative surfaces; No.1 (hot-rolled, oxidized) for structural fabrications requiring further processing.

Pain Point 2: Surface Defects — Scratches, Scuffs, and Inclusions. During transportation from China without adequate protective packaging, sheets — especially BA and No.4 finishes — sustain mechanical damage that renders them unsuitable for visible architectural or medical applications.

Solution: Multi-layer protective packaging: polyethylene film PE + cardboard interleaving + wooden pallet with steel banding. For mirror-finish BA sheets, additional PVC protective film is applied. Full photographic documentation of packaging condition prior to container loading.

Product Range — Sheet and Plate

Product Type	Steel Grades	Thickness, mm	Width, mm	Length, mm	Surface Finish	Applications
Cold-rolled sheet	AISI 304/304L	0.5 — 3.0	1000, 1219, 1500	2000, 2438, 3000	2B, BA, No.4	Tanks, countertops, wall cladding
Cold-rolled sheet	AISI 316/316L	0.8 — 3.0	1000, 1219, 1500	2000, 2438, 3000	2B, BA	Reactors, chemical equipment
Cold-rolled sheet	AISI 321	1.0 — 3.0	1000, 1219	2000, 2500	2B	Heat exchangers, exhaust collectors
Hot-rolled plate	AISI 304	4.0 — 50.0	1500, 1800, 2000	3000, 6000	No.1	Structural tanks, pressure vessels
Hot-rolled plate	AISI 316	4.0 — 40.0	1500, 1800, 2000	3000, 6000	No.1	Heavy chemical processing equipment
Hot-rolled plate	AISI 310S	4.0 — 30.0	1500, 1800	3000, 6000	No.1	High-temperature furnace structures
Checker plate / Tread plate	AISI 304	2.0 — 6.0	1000, 1250	2000, 2500	Diamond, 5WL	Flooring, platforms, walkways
Perforated sheet	AISI 304/316	0.8 — 3.0	1000, 1219	2000, 2438	2B	Screens, filters, ventilation panels

Technical Parameters — Sheet and Plate

Parameter	Cold-Rolled AISI 304 2B	Hot-Rolled AISI 304 No.1	Cold-Rolled AISI 316 2B
Thickness range, mm	0.5 — 3.0	4.0 — 50.0	0.8 — 3.0
Thickness tolerance	+/- 0.05 mm (up to 1 mm)	+/- 0.3 mm (4-8 mm range)	+/- 0.05 mm
Surface roughness Ra	0.3-0.5 micrometers	3-5 micrometers	0.3-0.5 micrometers
Density	7.93 g/cm3	7.93 g/cm3	8.00 g/cm3

Parameter	Cold-Rolled AISI 304 2B	Hot-Rolled AISI 304 No.1	Cold-Rolled AISI 316 2B
Tensile strength	515-620 MPa	515-620 MPa	515-620 MPa
Yield strength	205 MPa	205 MPa	205 MPa
Elongation	40%	40%	40%
International standard	ASTM A240, EN 10088-2	ASTM A240, EN 10088-2	ASTM A240, EN 10088-2

Surface Finish Specifications

Designation	Description	Roughness Ra	Typical Applications
2B	Matte, cold-rolled, annealed, pickled	0.3-0.5 micrometers	Food equipment, tanks, industrial fabrications
BA	Bright annealed, mirror-like reflective	<0.2 micrometers	Decorative, medical, electronic enclosures
No.4	Brushed unidirectional satin	0.4-0.6 micrometers	Architecture, elevator panels, kitchen equipment
HL (Hairline)	Fine directional brush pattern	0.3-0.5 micrometers	Decorative, escalators, premium facades
No.1	Hot-rolled, annealed, pickled (oxidized)	3-5 micrometers	Structural fabrications requiring further processing
8K	Super-mirror polish	<0.1 micrometers	Premium decorative, medical mirrors

HS Codes for Sheet and Plate

Product Description	HS Code	Typical Duty Rate
Cold-rolled sheets AISI 304/316, thickness ❤️ mm	7219.33.100	0-5% (destination-dependent)
Hot-rolled sheets AISI 304/316, thickness ❤️ mm	7219.24.000	0-5%
Hot-rolled sheets AISI 304/316, thickness >=3 mm	7219.24.000	0-5%
Stainless steel checker / tread plate	7219.24.000	0-5%

Metal-Asia.pw Global Procurement Services

Metal-Asia.pw delivers comprehensive stainless steel supply chain solutions from China, designed for international distributors, EPC contractors, and industrial OEMs:

- **Global Procurement Management:** Consolidated sourcing across multiple certified mills with single-point accountability

- **Supply Chain Compliance:** Full adherence to ASTM, EN, ASME, ISO, FDA, and destination-market regulatory requirements
- **Third-Party Quality Assurance:** Independent inspection by SGS, Bureau Veritas, or TUV; NDT (UT, RT, PT, MT), chemical analysis, and dimensional verification
- **Customs & Trade Compliance:** Accurate HS code classification, origin certification, and customs documentation for EU, North America, Middle East, Southeast Asia, and Latin America
- **Logistics & Freight Management:** Multimodal sea/rail/road/air freight with FOB, CIF, DAP, and DDP Incoterms options
- **Technical Documentation:** Mill Test Certificates 3.1/3.2 per EN 10204, material safety data sheets, inspection reports, and compliance declarations

For detailed service specifications, visit Metal-Asia.pw.

FAQ — Frequently Asked Questions

1. How can I verify genuine AISI 304 food-grade stainless steel and avoid counterfeit material?

Authentic AISI 304 contains 18-20% chromium and 8-10.5% nickel. Counterfeit products often substitute nickel with manganese (AISI 201 grade). AISI 201 contains only 14-16.5% chromium and 1-1.5% nickel, leading to corrosion within 6-12 months in food-contact environments. Metal-Asia.pw performs on-site spectrometric analysis at the manufacturer's facility in China before shipment. Every batch is accompanied by a Mill Test Certificate 3.1 per EN 10204 with actual chemical composition data.

2. Which stainless steel grade is suitable for chloride-containing environments such as salt brine or seawater?

For aggressive chloride environments — including salt solutions, seawater, and vinegar production — AISI 316 (UNS S31600) with 2-3% molybdenum content is the industry standard. Molybdenum enhances pitting and crevice corrosion resistance by a factor of 3-5 compared to AISI 304. For extreme marine or chemical applications, AISI 316L or super-austenitic AISI 904L is recommended.

3. What international standards apply to stainless steel procurement and compliance?

Key standards for global supply chains: ASTM A240 (sheet and plate), ASTM A269/A312 (seamless and welded pipes), ASTM A276 (bars and shapes), EN 10088 (European stainless steel grades), EN 10204 (inspection certificates), ISO 7153-1 (surgical instruments), ASME Section VIII (pressure vessels). Metal-Asia.pw ensures full compliance with destination-market standards, including FDA, EHEDG, and 3-A Sanitary Standards for food-contact applications.

4. What is the typical lead time for stainless steel deliveries from China?

Standard delivery from order confirmation to arrival at the client's designated port or warehouse ranges from 35-50 days for sea freight. Urgent air freight deliveries for small-gauge or critical components are available within 7-14 days. For large-scale industrial projects, we recommend procurement planning with a 60-day buffer to accommodate production scheduling and ocean freight consolidation.

5. What quality control procedures does Metal-Asia.pw implement during procurement?

Our multi-stage quality assurance protocol includes: spectrometric analysis of chemical composition at the mill, ultrasonic testing (UT) for internal defects, visual surface inspection per ASTM A480, dimensional verification with calibrated gauges, and third-party inspection by SGS, Bureau Veritas, or TUV upon client request. All results are documented in the Mill Test Certificate and inspection reports.

6. What HS codes apply to stainless steel imports for customs clearance?

Primary HS codes for international trade: 7219.33 (cold-rolled sheets <3mm), 7219.24 (hot-rolled sheets), 7304.41 (seamless pipes), 7306.40 (welded pipes), 7222.40 (bars and rods), 7307.29 (pipe fittings), 8481.80 (valves). Metal-Asia.pw provides full customs documentation support, including correct HS classification, country of origin certificates, and compliance declarations for EU, North American, Middle Eastern, and Southeast Asian markets.

7. Can I order custom cutting, forming, and surface finishing?

Yes. Our partner manufacturing facilities in China offer: CNC laser cutting (tolerance +/- 0.1 mm), press brake bending up to 180 degrees, surface polishing to mirror finish (Ra 0.2 micrometers), TIG/MIG welding with argon backing, and electropolishing for pharmaceutical-grade surfaces (Ra <0.4 micrometers). Minimum order quantity for custom fabrication starts at 500 kg per specification.

8. What supply chain risks does Metal-Asia.pw mitigate for international buyers?

Common procurement risks from China include: grade substitution (AISI 201 sold as AISI 304), thickness deviation beyond ASTM tolerances, missing or fraudulent certificates, customs delays due to incorrect documentation, and warranty disputes for defective material. Metal-Asia.pw eliminates these risks through direct mill relationships, independent pre-shipment inspection, full documentation compliance, bonded warehousing options, and contractual warranty terms with refund or replacement guarantees.

Contact Information

For all inquiries regarding food-grade and chemically resistant stainless steel procurement:

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