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TECHNICAL DATASHEET

[AISI 304L]

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► GENERAL DESCRIPTION

AISI 304L (UNS S30403) is a low-carbon austenitic stainless steel. By reducing the carbon content, 304L can effectively minimize the risk of intergranular corrosion during welding. It offers excellent corrosion resistance, good formability, and superior weldability, providing stable performance in a variety of corrosive environments.

This material is well suited for welded structures made from thick plates, as well as equipment designed for long-term service in corrosive environments.

► DESIGNATIONS & STANDARDS

DIN	ASTM	UNS	EN 10088	JIS
1.4307	A240 / F899	S30403	X2CrNi18-9	SUS304L

► PRODUCT FORMS & APPLICABLE STANDARDS

Product Form	Applicable Standards
Plate / Sheet	ASTM F899 Class 3; ASTM A240; ASTM A666; EN 10088-2; JIS G4305
Bar / Rod	ASTM F899 Class 3; ASTM A276; ASTM A479; AMS 5647; EN 10088-3; JIS G4303
Wire	ASTM F899 Class 3; ASTM A580; EN 10088-3; JIS G4309
Tube / Pipe	ASTM F899 Class 3; ASTM A269; ASTM A312; JIS G3459

► CHEMICAL COMPOSITION (MASS %) *In accordance with: [ASTM A666]*

Element	C	Mn	P	S	Si	Cr	Ni	N	Fe
Content (%)	≤0.030	≤2.00	≤0.045	≤0.030	≤0.75	18.00-20.00	8.00-12.00	≤0.10	Balance

► HEAT TREATMENT

Condition	Tensile Strength (MPa)	Yield Strength (MPa)	Elongation (4D)	Reduction of Area (%)	Hardness (HRB)
Annealed	≥485	≥170	40	/	≥92
1/4 Hard	≥860	≥515	10	/	/
1/2 Hard	≥1035	≥760	6	/	/

► APPLICATIONS

Condition	Dimension
Medical	Welded medical equipment housings / Sterilization equipment components / Medical cabinets / Fluid pipelines / Trays
Aerospace	Welded pipelines / Instrument housings / Brackets / Thin-walled structural parts / Low-carbon corrosion-resistant welded parts
Industrial	Chemical pipelines / Storage tanks / Heat exchanger components / Welded vessels / Food processing equipment
Mechanical engineering	Welded frames / Protective covers / Mounting plates / Cleanroom robot housings / Piping parts

► AVAILABLE FORMS

Available Form	Size Range	Surface Finish	Length (Customizable)	Tolerance (Customizable)	Delivery Condition
Plate	T0.5-T200.0mm	Milled	L:200/250/300 W:200/300/500/1000	-0.0/+1.0mm	Solid solution
Bar	φ1.0-φ200.0mm	Ground / Precision Polished	3M/PCS	h6-h9	Solid solution
Wire	φ1.0-φ3.0mm	Ground / Precision Polished	1M/PCS	h6-h9	Solid solution
Tube	OD: 1.0-10.0mm ID:0.08mm-2.0mm	Ground / Precision Polished	3M/PCS	h6-h9	Solid solution

Materials, specifications or special requirements not shown in the table can all be customized. Please contact our sales team.

► TESTING & CERTIFICATION

TESTING CAPABILITIES	QUALITY & TRACEABILITY
- Chemical: OES · O/N/H analyzer - Mechanical: tensile · Rockwell/Vickers · impact - NDT: ultrasonic testing (UT) - Metallography: optical & electron microscope - Dimensional: straightness / roundness / coaxiality	- ERP full-process traceability · heat-number control - Batch consistency control - Third-party testing: on request, at extra cost - Standards: ASTM · ISO · EN · AMS · DIN - MTC with each shipment

CERTIFICATION: ISO 13485 · ISO 9001

THIRD-PARTY TESTING: SGS



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