

► GENERAL DESCRIPTION

AISI 420B stainless steel is a martensitic stainless steel that combines relatively high hardness, good wear resistance, and moderate corrosion resistance. With a higher carbon content, it provides high hardenability while maintaining good toughness and wear performance, making it particularly suitable for mid- to high-end cutting-edge instruments. Through quenching and tempering treatment, excellent mechanical properties can be achieved, making it suitable for engineering applications that require high strength and wear resistance.

► DESIGNATIONS & STANDARDS

DIN	ASTM	UNS	EN 10088	JIS
1.4028	F899	S42000	X30Cr13	SUS420J2

► Product Forms & Applicable Standards

Product Form	Applicable Standards
Plate / Sheet	ASTM F899 Type 420B Class 4; ASTM A240; EN 10088-2 X30Cr13; JIS G4305 SUS420J2
Bar / Rod	ASTM F899 Type 420B Class 4; ASTM A276; EN 10088-3 X30Cr13; JIS G4303 SUS420J2
Wire	ASTM F899 Type 420B Class 4; ASTM A580; EN 10088-3 X30Cr13; JIS G4308 SUS420J2
Tube / Pipe	ASTM F899 Type 420B Class 4

► CHEMICAL COMPOSITION (mass %) In accordance with: [ASTM F899]

Element	C	Mn	P	S	Si	Cr	Ni	Fe
Content (%)	0.26-0.35	≤1.00	≤0.04	≤0.030	≤1.00	12.00-14.00	≤1.00	Balance

► HEAT TREATMENT

Condition	Temperature (°C)	Hardness (HRC)
Annealed	/	≤235 (HBW)
Hardening / Quenching	Q 1900°F/1038°C T 300°F/149°C+	≥49 (HRC)

► APPLICATIONS

Condition	Dimension
Medical	Surgical Scissors/Dental Instruments/Orthopedic Auxiliary Tools/Curettes/Clamp Components
Aerospace	Bushings/ pins, locking components/ light-duty bearing parts/ precision instrument components
Industrial	Industrial cutting tools / mold inserts / valve components / pump shafts / wear-resistant mechanical parts
Mechanical engineering	Gripper fingers / sliders / guide rail components / rotating shafts / tool connectors

► AVAILABLE FORMS

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

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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