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TECHNICAL DATASHEET

[AISI 440C]

Datasheet No. SX-003 · Version 260723

GENERAL DESCRIPTION

AISI 440C is a high-carbon martensitic stainless steel with excellent wear resistance, high strength, and good corrosion resistance. After heat treatment, this material can achieve high hardness and excellent mechanical properties while maintaining a certain level of corrosion resistance. Therefore, it is widely used in industrial and precision component applications where high wear resistance and strength are required.

DESIGNATIONS & STANDARDS

DIN	ASTM	UNS	EN 10088	JIS
1.4125	A276/F899	S44004	X105CrMo17	SUS440C

Product Forms & Applicable Standards

Product Form	Applicable Standards
Plate / Sheet	ASTM F899 Type 440C Class 4; ASTM A240; EN 10088-2 X105CrMo17; JIS G4305 SUS440C
Bar / Rod	ASTM F899 Type 440C Class 4; ASTM A276; ASTM A479; AMS 5630 ; AMS 5618 ; EN 10088-3 X105CrMo17; JIS G4303 SUS440C
Wire	ASTM F899 Type 440C Class 4; ASTM A580; EN 10088-3 X105CrMo17; JIS G4309 SUS440C

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

Element	C	Mn	P	S	Si	Cr	Mo	Fe
Content (%)	0.95-1.20	≤1.00	≤0.04	≤0.030	≤1.00	16.00-18.00	≤0.75	Balance

HEAT TREATMENT

Condition	Temperature (°C)	Hardness (HRC)
Annealed	/	≤285 (HBW)
Hardening / Quenching	Q 1900°F/1038°C T 300°F/149°C+	≥56 (HRC)

APPLICATIONS

Condition	Dimension
Medical	High-hardness surgical blades / bone drills / dental burs / micro cutting tools / wear-resistant instrument components
Aerospace	Precision bearings / balls / bearing rings / wear-resistant parts for control mechanisms / instrument rotating components
Industrial	High-hardness bearings / ball screw balls / valve seats / nozzles / cutting tools / wear-resistant mold components
Mechanical engineering	Precision bearings / joint rolling components / gripper wear pads / rotary support components / positioning balls

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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

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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