

[SAE 52100 BEARING STEEL TUBE](#)

Introduction:

52100 bearing steel is a high-carbon chromium alloy steel, which, because of its versatility, is used in a variety of mechanical applications. In the annealed condition this steel is comparatively easy to machine, yet very high hardness and abrasion resistance can be developed by heat treatment to make the steel particularly suitable for applications requiring extreme wear resistance. In addition, **52100 bearing steel** can be heat treated to high levels of tensile strength and fatigue strength.



The Typical Applications of 52100 Bearing Steel Tube:

- ✦ Sleeves
- ✦ Guides
- ✦ Slitting Rolls and Knives
- ✦ Spindles
- ✦ Precision Instrument Parts
- ✦ Bushings
- ✦ Collets
- ✦ Stamping Tools
- ✦ Gears
- ✦ Seals
- ✦ Dies
- ✦ Gages
- ✦ Molds
- ✦ Forming Rolls
- ✦ Pins
- ✦ Collars
- ✦ Spacers
- ✦ Machine Tool parts
- ✦ Pump Parts
- ✦ Tools
- ✦ Thrust Collars
- ✦ Anti-Friction Bearings
- ✦ Engine Parts
- ✦ Rollers
- ✦ Cylinder Liners
- ✦ Hydraulic Parts
- ✦ Clutch Faces
- ✦ Disintegrater Rolls

Quality Standard:

ASTM A295 High carbon chromium bearing steels

JIS G4805 High carbon chromium bearing steels

[SHANGHAI UNITE STEEL](#)

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DIN 17230 High carbon chromium bearing steels

GB 18254 200 2 高碳铬轴承钢

Grade:

ASTM/ A295	DIN 17230	JIS G4805	BS 970	GB/T 18254	ISO 683/17
52100	100Cr6	SUJ2	EN31(535A99)	GCr15	100Cr6
NF A35-565	SWEDEN	KS D3525	TOCT 801	No.	CNS 3014
100C6	SKF3	STB2	IIIX15	1.3505	SUJ2

Chemical Composition:

Gcr15	C	Cr	Si	Mn	P	S	Ni	Cu	Mo
Wt%	0.95-1.05	1.40-1.65	0.15-0.35	0.25-0.45	≤0.027	≤0.02	<0.23	≤0.25	≤0.1
GCr15	Sn	As	Ti	Sb	Pb	0	Al	Ca	
Wt%	<0.03	<0.04	<0.005	<0.002	<0.002	<0.001	<0.05	<0.01	

Process: Hot rolled, Cold drawn, Cold rolled, Hot rolled+ cold drawn.

Condition of Delivery: Hot rolled, Cold finished, Spheroidize Annealed,

Steel Quality:

The steel from which SAE 52100 Bearing Steel Tube is produced is made in electric furnaces using special refining techniques, which insure maximum cleanliness and freedom from objectionable microscopic slag type inclusions. This steel is made to conform to the stringent chemical and cleanliness requirements of ASTM, A295, and AMS 6440. The modified grades meet ASTM A485.

Condition:

SAE 52100 Bearing Steel Tube is generally furnished in the spheroidized annealed condition with maximum Brinell Hardness Number 207 for hot-finished or turned tubing, and 250 for cold-drawn tubing; roto-rocked tubing may exhibit a Brinell Hardness Number as high as 320. As furnished, each finish is in a condition for optimum machinability for its type, and for maximum uniformity after heat treatment. The long spheroidizing anneal may decarburize the OD and ID tube surfaces to the depth shown in Table I of ASTM Specification A 295. This shallow decarburized surface must be removed in machining.

Mill's test certificate:

EN 10204/3.1 with all relevant data reg. chem. composition, mech. properties and results of testing.

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Benefits of 52100 Bearing Steel Tube:

- Cleanliness and freedom from objectionable microscopic slag type inclusions.
- Shallow decarburized surface
- Good surface quality
- Dimensional accuracy and excellent micro-structure uniformity
- Enhanced machinability
- High strength to weight ratio
- Tight tolerances, resulting in reduced machine time.

Our Advantages:

- Fast delivery
- Non-standard sizes and made-to-order
- Small min order quantity
- Economical Pricing
- Quality confirming to International Standards
- Material Test Certificates for Quality Assurance
- Technical Qualified After Sales
- Excellent Delivery Conditions

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