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52100 bearing steel round bar

High-carbon chromium steel | Mozaic Precision Metals technical reference

Cleanliness and heat-treatment response important for bearing fatigue applications.

GRADE / PRODUCT SELECTION

REFERENCE FIELD	SPECIFICATION / BUYER INFORMATION
Material / product	52100 bearing steel round bar
Alloy or product family	High-carbon chromium steel
Chemical / material identity	SAE 52100 carbon-chromium through-hardening bearing grade
Selection consideration	Cleanliness and heat-treatment response important for bearing fatigue applications
Condition / temper	Specify annealed, spheroidized or hardened condition and inclusion level requirements
Reference standard to verify	SAE/AISI 52100; ASTM A295 for bearing-quality steel when applicable
Typical applications	Bearing races, rolling elements, precision bushings
Limits / cautions	High hardness applies after treatment and proper grinding; centerless overheating creates risks

RELATED MATERIAL CONSIDERATIONS

Compare 440C for corrosion-resistant bearing steel needs.

ORDERING & PROCESSING REQUIREMENTS

Specify the exact grade/product standard, condition, dimensions, quantity, surface finish, straightness and required certification. Specify annealed, spheroidized or hardened condition and inclusion level requirements.

SOURCING & QUALITY NOTE

Mozaic reviews precision grinding, straightening, polishing, cutting and packaging to order-specific requirements. Numeric strength, chemistry and condition limits must be checked against the applicable specification and actual mill test report.

Reference starting point: SAE J403: Chemical Compositions of SAE Carbon Steels

Material page: https://mozaicprecision.com/material/52100-steel/

General reference: not a mill test report, certified analysis, stock guarantee or design approval.