Bearing Steel GCr15 (SAE 52100 / 100Cr6 / 1.3505)

Designations: GCr15 | SAE 52100 | 100Cr6 | 1.3505

Applicable standards: GB/T 18254, ASTM A295, EN ISO 683-17

Product Description

Ochnology is a manufacturer and supplier of GCr15 bearing steel, equivalent to SAE 52100, 100Cr6 and 1.3505, in round bar and tube. It is a high-carbon chromium steel (0.95–1.05% C, 1.40–1.65% Cr) that reaches 60–65 HRC after hardening and offers high contact fatigue life and wear resistance. GCr15 is used for ball bearings, roller bearings, bearing races, rolling elements, precision shafts and tooling.

Chemical Composition (% by weight)

Element	GCr15 (GB/T 18254)	SAE 52100 (ASTM A295)
Carbon (C)	0.95–1.05	0.93–1.05
Silicon (Si)	0.15–0.35	0.15–0.35
Manganese (Mn)	0.25–0.45	0.25–0.45
Chromium (Cr)	1.40–1.65	1.35–1.60
Phosphorus (P)	≤ 0.025	≤ 0.025
Sulphur (S)	≤ 0.025	≤ 0.015

Mechanical and Physical Properties

Property	GCr15 (GB/T 18254)	SAE 52100 (ASTM A295)
Hardness, spheroidise annealed	179–207 HB	≤ 207 HB
Hardness after hardening	60–65 HRC	60–65 HRC

Supply Details

Item	Detail
Density	7.81 g/cm^3
Forms	Round bar, seamless tube
Delivery condition	Spheroidise annealed
Certification	Mill test certificate (EN 10204 3.1) and third-party inspection available on request

Typical Applications

- Ball and roller bearings
- Bearing races and rolling elements
- Precision shafts
- Tooling and wear parts

Ordering Information

To request a quotation, send the grade and standard, form, size or thickness, quantity, delivery condition, destination port and required certificates to info@ochnology.com or bd@ochnology.com. Typical values apply to the stated standards; actual values are certified on the mill test certificate for each lot.

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