Radhe Steel

TECHNICAL DATASHEET

EN31 / 100Cr6 / SAE 52100

High-carbon chromium bearing steel – bright bars

STANDARD REFERENCE

CHEMISTRY	EN ISO 683-17 (100Cr6); BS 970 (534A99)
BRIGHT PRODUCTS	EN 10278 dimensions and tolerances; condition by agreement
SOFT ANNEALED HARDNESS	≤207 HB (+A)



COMPARABLE STANDARDS

Europe (EN)	Germany (DIN / W.-Nr.)	UK (BS 970)	USA (SAE / AISI)	India (IS)	Japan (JIS)
100Cr6	1.3505	534A99 (EN31)	52100	—	SUJ2

"Nearest" means a comparable grade, not an identical one. Check the chemistry limits before substituting one for another.

CHEMICAL COMPOSITION (cast analysis, % by mass)

C	Si	Mn	P	S	Cr	Mo
0.93-1.05	0.15-0.35	0.25-0.45	≤0.025	≤0.015	1.35-1.60	≤0.10

Source: EN ISO 683-17 (cast analysis)

HARDNESS (by condition)

Condition	Hardness
Soft annealed (+A)	≤207 HB
Hardened and tempered at 150–200 °C	ca. 61-62 HRC

Source: EN ISO 683-17 (soft annealed value); typical hardened value per Ovako and Saarstahl datasheets; actual hardness depends on heat treatment

RECOMMENDED WORKING TEMPERATURES (°C)

Hot forming	Normalising	Soft annealing	Hardening	Quench	Tempering
–	–	–	830-870	Oil	150-180

Source: Steel mill datasheets (Ovako, Saarstahl) for hardening and tempering. A dash means no figure is given here; ask your heat treatment provider.

Indicative only. Consult your heat treatment provider.

SUPPLY RANGE

Shape	Size range (mm)	Tolerance class
Round	Ø 6-100 (alloy grades up to Ø 150)	h9 / h10 / h11
Hexagon	A/F 6-75	h9 / h11
Square	8-80	h11 / h12
Flat	Width 10-150 × thickness 3-50	On request

Catalogue range across grades. Confirm sizes, lengths and availability for this grade when you request a quote.

EN 10204 3.1 test certificate supplied with every delivery. Export orders shipped worldwide from India; ask for export packing and documents when you request a quote.

Scan to WhatsApp for a quote

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