Radhe Steel

TECHNICAL DATASHEET

20MnCr5 / 1.7147

Case hardening steel – bright bars

STANDARD REFERENCE

CHEMISTRY	EN 10084 (case hardening steels)
BRIGHT PRODUCTS	EN 10277-1 and -4; dimensions and tolerances EN 10278
INDIAN STANDARD	IS 1570: 20MnCr5
SOFT ANNEALED HARDNESS	≤217 HB (+A)



COMPARABLE STANDARDS

Europe (EN)	Germany (DIN / W.-Nr.)	UK (BS 970)	USA (SAE / AISI)	India (IS)	Japan (JIS)
20MnCr5	1.7147	527M20 (nearest)	5120 (nearest)	20MnCr5	SMnC420 / SCr420 (nearest)

"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
0.17-0.22	≤0.40	1.10-1.40	≤0.025	≤0.035	1.00-1.30

Source: EN 10084 (cast analysis)

MECHANICAL PROPERTIES

Mechanical properties depend on the size and delivery condition. The values for each consignment are stated on the EN 10204 3.1 test certificate; tell us the properties your drawing requires when you ask for a quote.

RECOMMENDED WORKING TEMPERATURES (°C)

Hot forming	Normalising	Soft annealing	Hardening	Quench	Tempering
–	–	–	830-870	Oil / water	150-200

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

+91-9172576932 · sales@radhesteel.com · radhesteel.com

Radhe Steel, G15, Basveshwara Industrial Complex, Bhosari, Pune – 411026

GSTIN 27AAGPU4978B2ZB

Rev. 11/2026