Radhe Steel

TECHNICAL DATASHEET

EN24 / 34CrNiMo6 / 4340

Nickel-chromium-molybdenum alloy steel – bright bars

STANDARD REFERENCE

CHEMISTRY	EN 10083-3 (34CrNiMo6); BS 970-3 (817M40)
BRIGHT PRODUCTS	EN 10277-1 and -5; dimensions and tolerances EN 10278
INDIAN STANDARD	IS 1570: 40Ni2Cr1Mo28 (nearest)
SOFT ANNEALED HARDNESS	≤248 HB (+A)



COMPARABLE STANDARDS

Europe (EN)	Germany (DIN / W.-Nr.)	UK (BS 970)	USA (SAE / AISI)	India (IS)	Japan (JIS)
34CrNiMo6	1.6582	817M40 (EN24)	4340 (nearest)	40Ni2Cr1Mo28 (nearest)	SNCM439 (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	Mo	Ni
0.30-0.38	≤0.40	0.50-0.80	≤0.025	≤0.035	1.30-1.70	0.15-0.30	1.30-1.70

Source: EN 10083-3 (cast analysis)

MECHANICAL PROPERTIES - QUENCHED AND TEMPERED (+QT) (by size band)

Size d (mm)	Rp0.2 (MPa) min	Rm (MPa)	A (%) min
d ≤ 16	1000	1200-1400	9
16 < d ≤ 40	900	1100-1300	10
40 < d ≤ 100	800	1000-1200	11
100 < d ≤ 160	700	900-1100	12

Source: EN 10083-3 (34CrNiMo6, reference sections)

RECOMMENDED WORKING TEMPERATURES (°C)

Hot forming	Normalising	Soft annealing	Hardening	Quench	Tempering
1100-850	830-870	650-700	830-860	Oil / polymer	540-660

Source: EN 10083-3. 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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