

EN36A CASE HARDENING STEEL

EN36A is a 3.2% Nickel – chromium high hardenability case hardening steel, generally supplied in the annealed condition. Exhibiting high core strength and toughness whilst having the ability to be case hardened up to 62 HRC, typical uses include: Gears, heavy duty bushing, collets, conveyor pins, sprockets, shafts etc.

Stocked Sizes - Rounds 14 mm – 260 mm Ø

Finishes - Peeled

Related Specifications

Australia	AS1444-1996-X3312/X3312H
Germany	W. Nr 1.5752 – DIN 14NiCr14
United Kingdom	BS970 Part 3 1991 – 655M13 BS 970 1955 – EN36A
USA	SAE 3310 9310 UNS G33106/G93106

Chemical Composition

	Min. %	Max %
Carbon	0.10	0.16
Silicon	0.10	0.40
Manganese	0.35	0.60
Nickel	3.00	3.75
Chromium	0.70	1.00
Molybdenum		0.20
Phosphorous		0.04 (Ultraclean – Max. 0.01)
Sulphur		0.04 (Ultraclean – Max. 0.01)

Typical Mechanical Properties in the Annealed Condition

Mechanical Property Designation

Tensile Strength Mpa	Approx.	700/770
0.20% Proof Stress (Yield) Mpa	Approx.	540
Elongation on %	Approx.	25
Hardness Brinell HB	Approx.	220 (Max. 255 BHN)

Annealing

Heat to 830-850 Deg C. Hold until temperature is uniform throughout the section and allow to cool in furnace.