

4140 HARD CHROME PLATED BAR

4140 High Tensile Chrome Plated Bar is supplied in the hardened and tempered condition, Cold Drawn or Turned, ground, chrome plated and polished. Chrome plating hardness has a surface hardness of HV 1000-1150.

4140 Chrome bar is used in applications demanding higher yield and tensile strength compared to 1045 Chrome Bar, and is also available in the Induction Hardened condition in some sizes. Induction Hardened 4140 generally has a hardened depth of approximately 3mm and hardness of 55-65 HRC.

Typical Applications include: Agricultural equipment, compressors, jacks, transport lifting equipment, hoists and mining/earthmoving equipment

Available Sizes - Metric - 20 mm – 120 mm Ø
Imperial - 3/4" – 6" Ø

Related Specifications – Base Material

Australia	AS 1444 – 1996 4140
Germany	W. Nr 1.7225 42CrMo4
Japan	JIS G4105 SCM440
USA	AISI/SAE 4140 ASTM A29/A29M – 91 4140 UNS G41400

Chemical Composition*

	Min. %	Max %
Carbon	0.36	0.44
Silicon	0.10	0.40
Manganese	0.65	1.10
Chromium	0.75	1.20
Molybdenum	0.15	0.35
Phosphorous		0.04
Sulphur		0.04

Typical Mechanical Properties Based on Turned Bar – (For Guidance Only)

Tensile Strength (Mpa)	850-1000
Yield Strength (Mpa)	650-850
Elongation in 50mm (%)	14-30
Hardness (Brinell BHN)	248-302

Hard Chrome Plating

Typical Surface Hardness (Chrome Plated)	HV 1000-1150
Typical Surface Smoothness	0.10 – 0.30 um Ra (Microns)
Typical Surface Deposit	0.025-0.050mm (0.001"-0.002")

Diameter & Straightness Tolerance

Size mm	Up to 51mm dia		Over 51mm to 102mm Dia		Over 102 mm dia	
Dia Tol (mm)	+0	-0.025	+0	-0.05	+0	-0.075
Straightness	0.25mm/1000mm		0.30mm/1000mm			