

1045 INDUCTION HARDENED CHROME PLATED BAR

1045 Chrome Plated Bar is supplied Cold Drawn or Turned, Induction Hardened, ground, chrome plated and polished condition. Chrome plating hardness has a surface hardness of HV 1000-1150, and is Induction Hardened to a depth of approximately 3mm and a hardness of 55-65 HRC.

1045 Chrome bar is the most commonly used of the Chrome Bar options as it combines good strength and impact properties and a cost effective solution.

Typical Applications include: Mining and Earthmoving Equipment as well as heavy duty industrial equipment.

Available Sizes - Metric - 25 mm – 110 mm Ø
Imperial - 1" – 6" Ø

Related Specifications – Base Material

Australia	AS 1442/1443 – 1992 1045
Germany	C45 (W.Nr 1.0503) CK45 (W. Nr 1.1191)
Japan	JIS G4051 S45C
USA	AISI C1045 ASTM A29 – 91 1045 SAE 1045 UNS G10450

Chemical Composition*

	Min. %	Max %
Carbon	0.43	0.50
Silicon	0.10	0.35
Manganese	0.60	0.90
Phosphorous		0.04
Sulphur		0.04

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

Tensile Strength (Mpa)	570-700
Yield Strength (Mpa)	300-500
Elongation in 50mm (%)	14-30
Hardness (Brinell BHN)	170-210

Typical Induction Hardened Case Properties

Depth of hardness	Approx. 3mm
Hardness	55-65 HRC

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			