

CHROME PLATED BAR – AISI 4140

AISI 4140 High Tensile Steel, with a tensile strength range of 800 – 1200 Mpa, and a hard chrome plated surface of over 900 HV, offering high strength, with excellent wear resistance, and good corrosion resistance.

TYPICAL APPLICATIONS:

Hydraulic and pneumatic cylinders highly stressed for mining, machine tools, earth moving equipment, car jacks, food processing, mechanical tools, compressors, waste disposal transport, agricultural, transport lifting equipment, hoists etc.

INDUCTION HARDENED CASE DEPTH:

Up to 18mm Ø	2000 – 3600mm
Over 18mm Ø	4000 – 7500mm

PACKAGING:

Each bar supplied in a cardboard tube.

WELDING:

Not recommended due to the effect on mechanical properties in the heat affected zone, however, if unavoidable the following is a guide only

Remove cardboard tube from the heat affected zone.

Low hydrogen electrodes recommended. Pre-heat at 200-300°C, and slow cool

TYPICAL MECHANICAL PROPERTIES: BASE METAL – for guidance only

Size mm	Yield Strength MPa	Tensile Strength MPa	Elongation %	Hardness HB
18 - 40	750 min	1000 – 1200	11 min	295 - 360
40 – 100	650min	900 – 1100	12 min	265 – 330
100 – 125	550 min	800 – 950	13 min	240 - 280

TYPICAL ANALYSIS: BASE METAL

Carbon	0.40%
Silicon	0.25%
Manganese	0.85%
Chromium	1.00%
Molybdenum	0.25%

RELATED SPECIFICATIONS: BASE METAL

AS 1444 - 1996	4140
EN10083-1-1991	1.7225 42CrMo4
JIS G 4105	SCM 440
SAE & UNS	4140 & G41400

TYPICAL HARD CHROME PLATING:

Hardness:	900 -1100 HV
Roughness:	0.10 - 0.30 Ra microns
Thickness:	15 - 30 microns
100-150mm unplated at bar ends.	

TYPICAL DIMENSIONAL TOLERANCE:

Diameter:	to ISO f7
Straightness:	0.2 mm / 1000 mm

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