

## CHROME PLATED BAR – AISI 4140

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**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.

### Typical Bar Lengths:

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 the cardboard tube from the heat affected zone.

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

### Typical Analysis: Base Metal

<b>Carbon</b>	<b>0.40%</b>
<b>Silicon</b>	<b>0.25%</b>
<b>Manganese</b>	<b>0.85%</b>
<b>Chromium</b>	<b>1.00%</b>
<b>Molybdenum</b>	<b>0.25%</b>

### 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

### Typical Mechanical Properties: Base Metal

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