

voestalpine HIGH PERFORMANCE METALS

CHROME BAR / AISI 4140

DESCRIPTION

Chromium Molybdenum steel for applications requiring high tensile strength and toughness, in particular in medium and large cross sections in the quenched and tempered condition. The addition of Molybdenum prevents the steel from being susceptible to temper brittleness.

NEAREST STANDARDS

AISI	DIN	BS	UNS
4140	1.7225 / 41CrMo4	EN19A	G41400

CHEMICAL ANALYSIS (MAX %)

C	Si	Mn	Ni	Cr	Mo	S	P
0.40	0.40	1.00	-	1.10	0.30	0.035	0.035

MECHANICAL PROPERTIES

Tensile Strength Mpa	Yield Strength Mpa	Elongation (%)
900-1150	Min 735	Min 14

CASE DEPTH (INDUCTION HARDENING)

Stock Diameter (mm)	Case Depth (mm)	Case Hardnes Before Plating (HRC)
12-20	1.00 +/-0.5mm	55-56
20-40	1.50 +/-0.5mm	55-56
40-80	2.00 +/-0.5mm	55-56
80-120	2.50 +/-0.5mm	55-56

HARD CHROME PLATING

Surface Hardness	Surface Finish	Surface Deposit
800-100 HV (64-69 RC)	0.10-030um Ra	0.025-0.050mm

TOLERANCES

Diameter	Straightness	Roundness	Concentricity	Bearing Ratio
According to ISO F7	<0.50mm / 2000mm	<1/2 of ISO F7 field	+/- 0.3 um	>50% (at depth 0.15um)

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STORAGE & HANDLING

The Chrome plated bars can easily be damaged, therefore they are delivered protected by packaging in cardboard or plastic tubes. It is necessary to follow several precautions while handling the product between delivery and final production

Handling:

During handling, never use steel chains, always use canvas or plastic belts, fork lift tynes must be lined with wood or plastic material.

Cutting:

Leave the bar in its protective sleeve and cut dry, cutting emulsions containing water can be absorbed in the sleeve and cause erosion. Vice jaws must be lined with plastic or wood.

Storage:

Chromed bars must be stored in dry conditions and not exposed to the sun light. Direct contact with the floor should be avoided.

PERFORMANCE IS IN OUR DNA

voestalpine High Performance Metals is the global market leader in the production of tool steels and one of the world's leading suppliers of high-speed steels, valve steels, special steels, powder metallurgy steels, and nickel-based alloys. We also manufacture die-forged components and large castings from nickel-based alloys and high, medium and low alloy steels.

Customers rely on our key brands of Bohler, Uddeholm and Villares, to set the highest standards of innovation, quality and service across a wide range of industries including automotive, aerospace, consumer electronics and oil & gas. We are fully integrated from steel production through to local customer sales, ensuring we keep our customers One Step Ahead.

EXPLORE WHAT IS POSSIBLE.



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