

MATERIAL DATA SHEET



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AISI/SAE 4130

Condition of supply:-	<i>As Rolled/Forged, Annealed, Quenched & Tempered</i>
Surface Condition:-	<i>Black, Bright, Proof machined, Machined to Requirements</i>

Description:

AISI 4130 is a Low alloy Steel containing Chromium Molybdenum as strengthening agents. It is supplied as round bar commonly in the hardened and tempered condition with a hardness of 18-22 HRC. With a lower carbon content range than AISI 4140, AISI 4130 has excellent weldability and machinability characteristics.

Typical Applications:

AISI 4130 suits many applications as forgings in the Aerospace and Oil & Gas industries as Forged Valve Bodies Pumps and other Low Stress Oil & Gas applications as well as Agricultural and Defence Industries

Typical Chemical Composition:

	C	Si	Mn	S	P	Cr	Ni	Mo	V	Al	Cu	Sn
Min	0.28	0.15	0.40			0.80		0.15		0.01		
Max	0.33	0.35	0.60	<0.025	0.025	1.10	<0.5	0.25	<0.02	0.04	<0.35	<0.035

Typical Mechanical Properties: At room temp, heat treated to 18-22HRC

	Tensile Strength	Yield (0.2%)	Elongation	Reduction of area	Hardness	Charpy	
	KSI	KSI	%	%	HRC (HB)	-46C	-60C
Min	95	60	20	40	18 [217]	42	27
Max	130	110			22 (235)		

Machining

AISI/SAE 4130 is readily machinable allowing processes such as Sawing, Turning, Drilling, Boring and Milling to be relatively easily achieved.

Welding:

Welding of AISI4130 can easily be achieved using all common arc welding processes, but in order to prevent cracking it should be Pre -Heated to 150-290C.

Pre-heating inter-pass temperature depends on the section thickness of the steel

Form of supply:

Material can be supplied as Black As Rolled/Forged Bar, Proof Machined, Bright Turned or Ground Bar, Cut Pieces or Machined to customer specification.

Size ranges from:

<35mm diameter - 1150mm diameter