



P. SOOD & CO.

Plot NO. 50 (DOOR No.76) SIDCO Industrial Estate Ambattur,
Chennai 600 098 Tamil Nadu, India.

M: +91 7358771760 E: gaurav@psood.co.in W: www.psood.co.in
UDYAM – TN-02-0006385 GST No.33AARFP6030A1ZL PAN AARFP6030A TAN –CALP20643A IEC – AARFP6030A

DATA SHEET:

AISI 4140 - Q&T PEELED & GROUND BAR.

4140 is a 1% chromium - molybdenum medium hardenability general purpose high tensile steel - generally supplied hardened and tempered in the tensile range of 850 - 1000 Mpa (condition T).

4140 is now available with improved machinability, which greatly increases feeds and/or speeds, while also extending tool life without adversely affecting mechanical properties.

4140 is used extensively in most industry sectors for a wide range of applications such as:

Adapters,
Arbors,
Axle Shafts,
Bolts,
Crankshafts,
Connection Rods,
Chuck Bodies,
Collets,
Conveyor
Pins & Rolls,

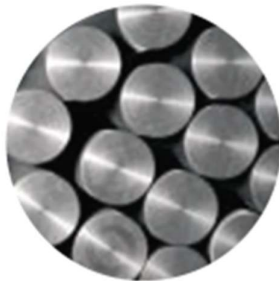
Forks,
Gears,
Guide Rods,
Hydraulic Shafts &
Parts,
Lathe Spindles,
Logging Parts,
Milling Spindles,
Motor Shafts,
Nuts,

Pins Various,
Pinions,
Pump Shafts,
Rams,
Sockets,
Spindles,
Sprockets,
Studs,
Tool Holders,
Torsion Bars

Ejector Pins,
Worms

Pinch Bars,

etc.



HARDENED STEEL-
INDUCTION. QUENCH &
TEMPERING LINE.



INDUCTIVE SINGLE BAR
QUENCH & TEMPER
SYSTEMS



OUR MANUFACTURING
PROCESS

Get in touch with us -

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Colour Code	Stocked Sizes		AISI 4140		
Dark Blue (Bar End)	Rounds	8 mm to 75 mm Diameter			
	Bar Finish				
	Peeled, Cold Drawn, Turned and Polished, Centreless Ground. or Hot Rolled.				
Related Specifications					
Australia	AS 1444-1996-4140	International	ISO 683/II Type 3	USA	AISI 4140
Germany	DIN 17212 W.Nr 1.7223 Type 41CrMo4		ISO 683/IV Type 3a		ASTM A29/A29M-91 4140
	DIN 17200-1654 W.Nr 1.7225 Type 42CrMo4		ISO 683/IV Type 3b		ASTM A322 4140
	DIN 17200 W.Nr 1.7227 Type 42CrMoS4	Japan	JIS G 4103 SNCM4		ASTM A331 4140 (Cold Finish)
Great Britain	BS970-1955 EN19A		JIS G 4105 SCM4		SAE 4140
	BS970 Part 3:1991 709M40		JIS G 4105 SCM440		

Chemical Composition (Base Material)

	Min. %	Max %
Carbon	0.36	0.44
Silicon	0.1	0.4
Manganese	0.65	1.1
Chromium	0.75	1.2
Molybdenum	0.15	0.35
Phosphorous	0	0.04
Sulphur	0	0.04

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Mechanical Property Requirements for Steels in the Heat-Treated Condition for Turned, Peeled or Ground Finish to AS1444-1996 4140 and BS970 Part 3-1991 709M40									
Mechanical Property Designation		R	S	S	*T	U	V	W	
Limited Ruling Section mm		250	250	150	100	63	30	20	
Tensile Strength Mpa	Min	700	770	770	850	930	1000	1080	
	Max	850	930	930	1000	1080	1150	1230	
0.2% Proof Stress Mpa	Min	480	540	570	655	740	835	925	
Elongation on 5.65√S0 %	Min	15	13	15	13	12	12	12	
Izod Impact J	Min	34	27	54	54	47	47	40	
Charpy Impact J	Min	28	22	50	50	42	42	35	
Hardness Brinell HB	Min	201	233	233	248	269	293	311	
	Max	255	277	277	302	331	352	375	
*Material stocked generally in condition T									
Check test certificate if critical for end use.									
Mechanical Property Requirements for Steels Heat-Treated, and then Cold Finished to AS 1444 - 1996, and BS 970 Part 3 - 1991 709 M40									
Mechanical Property Designation				R	S	T	U	V	
Limited Ruling Section				63	63	63	63	63	
Tensile Strength Mpa			Min	700	770	850	930	1000	
			Max	850	930	1000	1080	1150	
0.20% Proof Stress Mpa			Min	525	585	680	755	850	
Elongation on 5.65√S0 %			Min	12	11	9	9	9	
Hardness Brinell HB			Min	201	223	248	269	293	
			Max	255	277	302	331	352	
*Material stocked generally in condition T									
Check test certificate if critical for end use.									

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INDCUTION HEATING, QUENCH AND TEMPERING – STEEL BAR.



PEELING PROCESS – SURFACE REMOVAL OF STEEL BAR



HEAT TREATED STEEL BAR – IN PEELED, REELED AND GROUND FINISH.



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