

OTAI SPECIAL STEEL is ASTM 4142 Alloy structural steel stockholders and suppliers from china. we have more 16 years experience in 4142 steel supply.

4142 Steel is a high quality Quenched and Tempered Alloy Structural steel, It belong to the high quality medium carbon, Oil Quenched & Tempered Hardness is 28-34 HRC. 4142 Annealing delivery hardness less than 250HB.

4142 Alloy structural steel properties is very similar with GB 40CrMnMo steel, JIS SCM440 and DIN 1.7225 Alloy structural steel. At most work environment, 4142 is equivalent with 42CrMo, 1.7225, SCM440 steel.

Related Specifications ASTM A29/A29M DIN EN 10083/3 JIS G4053 GB GB/T 3077

Chemical composition

C(%)	0.40~ 0.45	Si(%)	0.15~0.35	Mn(%)	0.75~ 1.00	P(%)	≤0.035
S(%)	≤0.040	Cr(%)	0.80~1.10	Mo(%)	0.15~ 0.25		

Form of Supply

ASTM 4142 Alloy structural steel, we can supply the 4142 round bar, steel flat bar, plate, hexagonal steel bar and steel square block. 4142 steel Round bar can be sawn to your required lengths as one offs or multiple cut pieces. 4142 Rectangular pieces can be sawn from flat bar or plate to your specific sizes. Ground tool steel bar can be supplied, providing a quality precision finished bar to tight tolerances.



Round



sheet



Square



Plate

Applications

DIN 4142 Tool steel is a alloy structural steel, 4142 is used for engineering structural, like high tensile shafts, bolts and nuts, gears, pinions and spindles. Locomotive traction with the big gear, supercharger drive gear, pressure vessel, rear axle, gear load of connecting rod and a spring clip, 4142 can also be used to under 2000 m deep well of oil drill pipe joint and the fishing tool, and can be used for bending machine mould, etc

AISI 4140 equivalent material

- Japanese JIS SCM440 alloy steel
 - Germany DIN WN-r 1.7225 / 42CrMo4 steel alloy
 - China GB 42CrMo steel
 - British BS 708M40
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AISI 4140 alloy steel Chemical composition

ASTM A29/29M	C	Si	Mn	Cr	Mo	P
4140	0.38~0.43	0.15~0.35	0.75~1.00	0.80~1.10	0.15~0.25	≤0.0
DIN WN-r	C	Si	Mn	Cr	Mo	P
1.7225	0.38~0.45	≤0.40	0.60~0.90	0.90~1.20	0.15~0.30	≤0.0
GB/T	C	Si	Mn	Cr	Mo	P
42CrMo	0.38~0.45	0.17~0.37	0.50~0.80	0.90~1.20	0.15~0.25	≤0.0
BS	C	Si	Mn	Cr	Mo	P
708M40	0.36~0.44	0.10~0.35	0.70~1.00	0.90~1.20	0.15~0.25	≤0.0
JIS	C	Si	Mn	Cr	Mo	P
SCM440	0.38~0.43	0.15~0.35	0.60~0.85	0.90~1.20	0.15~0.30	≤0.0

Alloy steel 4140 Applications

DIN 4140 Tool steel is a alloy structural steel, 4140 is used for engineering structural, like high tensile shafts, bolts and nuts, gears, pinions and spindles. Locomotive traction with the big gear, supercharger drive gear, pressure vessel, rear axle, gear load of connecting rod and a spring clip, 4140 can also be used to under 2000 m deep well of oil drill pipe joint and the fishing tool, and can be used for bending machine mould, etc

Supply Size range

hot rolled 4140 steel bar: Ø5mm-200mm

Forging 4140 steel bar: Ø140mm-3000mm

Hot rolled 4140 steel plate: Thickness 10mm-200mm x width 100-2300mm

Forged 4140 material steel plate: Thickness 150-1500mm x Width 100 x 3000mm

Others 4140 material have not specified size, pls [contact](#) our experienced sales team.

4140 alloy steel Heat treatment

PHYSICAL PROPERTIES

DENSITY: 0.280 LB/IN³ (7750 KG/M³)

SPECIFIC GRAVITY: 7.75

MACHINABILITY: 65-70% OF A 1% CARBON STEEL

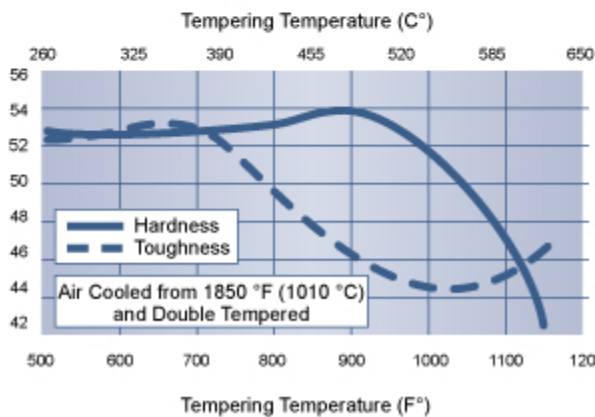
Modulus of Elasticity

Temp °F	Modulus psi x10 ⁶	Temp °C	Modulus GPa
70	30.0	21	206.8
200	29.0	93	199.9
400	27.0	204	186.2
600	28.5	316	196.5
800	27.5	427	189.6
1000	23.0	538	158.6

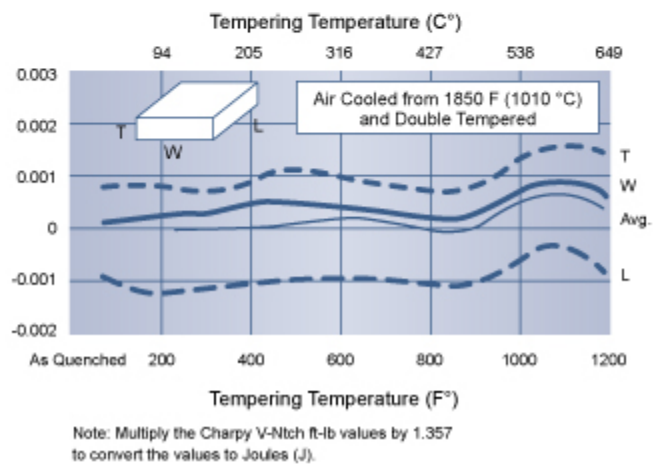
Coefficient of Thermal Expansion (47-48 HRC)

Temperature °F	in/in °F x10 ⁻⁶	Temperature °C	mm/mm °C x10 ⁻⁶
80 - 200	5.8	21 - 93	10.4
80 - 400	6.3	21 - 204	11.3
80 - 800	6.9	21 - 316	12.4
80 - 1200	7.3	21 - 427	13.1
80 - 1500	7.5	21 - 538	13.5

Heat Treatment Response



Size Change during Hardening



Processing

4140 steel round bar and flat sections can be cut to your required sizes. 4140 tool steel ground bar can also be supplied, providing a high quality tool steel precision ground tool steel bar to your required tolerances. 4140 steel is also available as Ground Flat Stock / Gauge Plate, in standard and nonstandard sizes.

Contact our experienced sales team to help you with your 4140 alloy structural steel questions and enquiry by [Email](#) or Telephone. The 4140 steel questions will be reply in 24 hours

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[Processing](#)

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