ALLOY STEEL Advanced Materials. Engineered for Performance.

AISI 4140 / 42CrMo4

Alloy Steel | AISI: 4140 | EN: 42CrMo4 / 1.7225 | JIS: SCM440

The benchmark chromium-molybdenum through-hardening engineering steel. Excellent combination of strength, toughness and machinability in the quenched and tempered condition.



Stock status: Ex-stock Dubai - Typical lead time: 2 - 3 working days ex Dubai

Key features

- Deep hardenability
- Good machinability in annealed condition
- Available pre-hardened and stress relieved

Available forms & sizes

Form	Size range
Round Bars	16 - 800 mm dia, forged or peeled
Plates	10 - 200 mm thk
Blocks & Profiles	Cut blocks to size

Chemical composition (%)

Element	Min	Max
C	0.38	0.43
Cr	0.80	1.10
Mo	0.15	0.25
Mn	0.75	1.00

Mechanical properties

Property	Value	Unit
Yield Strength (Q+T)	650 - 900	MPa
Tensile Strength (Q+T)	900 - 1100	MPa
Elongation	12 min	%
Hardness (Q+T)	280 - 320	HBW

Physical properties

Property	Value	Unit
Density	7.85	g/cm3

Standards

ASTM A29, EN 10083-3

Equivalent grades

1.7225, 42CrMo4, SCM440, 709M40

Industries served

Oil & Gas, General Engineering, Mining, Automotive

Typical applications

- Drive shafts and axles
- Gears and couplings
- Drill collars and tool joints
- Hydraulic cylinder rods

Live datasheet