

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.

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

Typical Applications



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Technical Data Sheet

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

Industries Served

Oil & Gas, General Engineering, Mining, Automotive