

Data Sheet: Steel 1.7225

(42CrMo4)

Alternative Designations

Standard	AFNOR	ANSI/AA	BS	JIS	SIS	UNE
Designation	42CD4	4140	708M40	SCM440(H)	2244	42CrMo4

Details

This material has high strength, toughness, good hardenability and good resistance to impact. It is widely used in the construction of machines, axles, gear shafts, wheel and base plates. It is also used for the production of large plastic molds.

Key Features

High strength • Tough • Resistance to impact

Chemical Composition

Element	C	Si	Mn	Cr	Mo	S	Other
Percentage	0.42	0.25	0.75	1.1	0.022	0.035	Pb

Mechanical Properties

Property	Yield strength [MPa]	Ultimate tensile strength [MPa]	Elongation [%]	Hardness
Value	720	860	10	219

Physical Properties

Property	Value
Density [g/cm ³]	7.7
Module of elasticity [GPa]	190 - 210
Electrical conductivity [m/Ω · mm ²]	1.82
Coefficient of thermal expansion [K ⁻¹ · 10 ⁻⁶]	10
Thermal conductivity [W/m · K]	25
Specific heat capacity [J/kg · K]	460

Reference

Datasheets provided by Xometry contain materials sourced through trusted OEMs, material distributors, and databases. Please visit [Materialdatacenter.com](https://www.materialdatacenter.com) for further information on this material.