

Data Sheet: Steel 1.7131

(16MnCr5)

Alternative Designations

Standard	AFNOR	ANSI/AA	BS	JIS	SIS	UNE
Designation	16MC5	5115	527M20	SCR415	2511	16MNCr5

Details

It has high surface hardness and wear resistance with good machinability. With a tensile strength of 600MPa, it is ideal for the manufacturing of gears, worms, bushings and other machine components.

Key Features

High surface hardness • Wear resistance

Chemical Composition

Element	C	Si	Mn	P	S	Cr
Percentage	0.14 - 0.19	0.4	1 - 1.30	0.025	0.035	0.8 - 1.1

Mechanical Properties

Property	Yield strength [MPa]	Ultimate tensile strength [MPa]	Elongation [%]	Hardness
Value	1000	600 - 1160	15	207

Physical Properties

Property	Value
Density [g/cm ³]	7.7
Module of elasticity [GPa]	190 - 210
Electrical conductivity [m/Ω · mm ²]	1.43
Coefficient of thermal expansion [K ⁻¹ · 10 ⁻⁶]	16
Thermal conductivity [W/m · K]	42.7
Specific heat capacity [J/kg · K]	477

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.