



# Steel 1.2510 / 100MnCrW4 / SKS3, annealed

## Alternative Designations

O1 (AISI) | SKS3 (JIS)

## Key Features

Durable • Wear-resistant • High strength

## Description

Steel 100mncrw4 is a high-carbon steel that is often used in the manufacturing of blades and other cutting tools. The steel is known for its durability and resistance to wear. The steel is also easy to sharpen, making it a good choice for tools that will need to be regularly maintained. It is typically used in applications where high levels of wear resistance are required, such as in cutting tools for metal.

## Mechanical Properties

Yield strength	350 – 550 MPa
Tensile strength	650 – 880 MPa
Elongation at break	8 – 25%
Hardness	34 – 64
Module of elasticity	193 GPa

## Physical Properties

Density	7.75 g/cm <sup>3</sup>
Electrical conductivity	3.125 m/Ω · mm <sup>2</sup>
Coefficient of thermal expansion	10 K <sup>-1</sup> · 10 <sup>-6</sup>
Thermal conductivity	25 W/m · K
Specific heat capacity	460 J/kg · K

## Chemical Composition

Al	-	N	-
Bi	-	Nb	-
C	0.90 – 1.05%	Ni	-
Cd	-	O	-
Co	-	P	0.035%
Cr	0.50 – 0.70%	Pb	-
Cu	-	S	0.035%
Fe	-	Si	0.15 – 0.35%
H	-	Sn	-
Mg	-	Ti	-
Mn	1 – 1.2%	V	0.05 – 0.15%
Mo	-	Zn	-

## Reference

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