



# Steel 1.0117 / S235J2 / S235J2G4, pickled and oiled

## Alternative Designations

A36 (ASTM) | 10025-2 (EN) | G3106 (JIS)

## Key Features

Good weldability • Formability • Durable • Resistant to rust and corrosion

## Description

It is a low carbon steel with good weldability and formability. This material is often used in the automotive and construction industries. Some of the benefits of using this material include excellent durability and low carbon content. The low carbon content makes it easier to weld. Additionally, the pickling and oiling helps to protect the material from rust and corrosion. Its most common applications include automotive industry and construction industry.

## Mechanical Properties

Yield strength	250 MPa
Tensile strength	400 MPa
Elongation at break	12 – 31%
Hardness	75
Module of elasticity	190 – 210 GPa

## Chemical Composition

Al	-	N	-
Bi	-	Nb	-
C	0.15%	Ni	-
Cd	-	O	-
Co	-	P	0.03%
Cr	-	Pb	-
Cu	-	S	0.035%
Fe	-	Si	-
H	-	Sn	-
Mg	-	Ti	-
Mn	0.6%	V	-
Mo	-	Zn	-

## Physical Properties

Density	7.87 g/cm <sup>3</sup>
Electrical conductivity	1.42 m/Ω · mm <sup>2</sup>
Coefficient of thermal expansion	16 – 17 K <sup>-1</sup> · 10 <sup>-6</sup>
Thermal conductivity	16 W/m · K
Specific heat capacity	500 J/kg · K

## 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.