



6201

Aluminium Alloy Data sheet

Material NOTE: The following data is for general reference only and NOT FOR DESIGN.

Description

Alloy 6201 is a Magnesium-Silicon bearing alloy suitable for high conductivity and high strength applications. Suited to electrical conductors where high strength to weight ratios are required.

Alloy designations

Al6201, UNS A96201, ISO AlMg1SiCu, Aluminium 6201, AA6201-0

Applications

- Electrical conductors
- Lightweight components requiring high strength.

Substitutable Alloys

Chemical Composition¹

Alloy	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	B	Others	Al(min)
6201	0.5-0.9	0.5	0.1	0.3	0.6-0.9	0.03		0.1	0.06	0.1	97.3%

NB: Assays in % max.

Physical Properties

Property	Value
Density	2.69g/ cc
Melting point	650 °C
Modulus of Elasticity	70 GPA
Resistivity	3.16e-006 ohm-cm
Electrical Conductivity	52.5 % IACS

Mechanical properties

AS1865 Aluminium & Alloys – drawn wire, rod bar & strip

Temper		Ultimate Tensile strength	Elongation
--------	--	---------------------------	------------

¹ Complying with ASTM Aluminium Association

		Mpa	Ksi	%
6201-F	As drawn			
H0	Annealed	110-152		14-16
T81		330		6
T6		220		15

#: Typical averages

Solution Treatment

Alloy 6201 is hardenable by processes of precipitation hardening heat treatment followed by controlled cooling and ageing processes.

Solution Temperature 510 c

Aged temperature 160 C

Physical performance

Weldability	Readily weldable using commercial filler metals. Filler metals usually ?? alloy
Machinability	Good machinability .
Corrosion	6xxx series aluminium has good corrosion resistance .
Appearance	Bright chrome like appearance in drawn condition. Annealed metal is dull in appearance.
Surface cleaning	Wire surface can be cleaned readily with mineral solvents. Heavily contaminated surfaces can be cleaned using hot +70°C diluted caustic solution

References

ASTMB211 Standard Specification for Aluminium and Aluminium Alloy Bar rod and wire

ASTM B398 Aluminium alloy 6201