



# Aluminium 46500 / A380 / Al-Si8Cu3

## Alternative Designations

AlSi8Cu3

## Key Features

Excellent machinability • Easy casting • Hot cracking resistance

## Description

The A380 Aluminium gives an excellent combination of machinability, heat transfer and easy casting together with other properties. The fluidity of this material is excellent. It has a good resistance to hot cracking and pressure tightness. The presence of silicon makes it a bit rough. This material is applied in a variety of products such as engine mounts, electrical equipment chassis, generators and even furniture.

## Mechanical Properties

Yield strength	90 – 140 MPa
Tensile strength	150 – 240 MPa
Elongation at break	1%
Hardness	60 – 80
Module of elasticity	75 GPa

## Chemical Composition

Al	Rest is Al	N	-
Bi	-	Nb	-
C	-	Ni	0.35%
Cd	-	O	-
Co	-	P	-
Cr	-	Pb	0.25%
Cu	2 – 3.5%	S	-
Fe	0.8%	Si	7.5 – 9.5%
H	-	Sn	0.15%
Mg	0.05 – 0.55%	Ti	0.25%
Mn	0.15 – 1.65%	V	-
Mo	-	Zn	1.2%

## Physical Properties

Density	2.75 g/cm <sup>3</sup>
Electrical conductivity	1.56E+07 m/Ω · mm <sup>2</sup>
Coefficient of thermal expansion	21.2 K-1 · 10-6
Thermal conductivity	110 – 130 W/m · K
Specific heat capacity	880 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.