



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 ³
Electrical conductivity	1.56E+07 m/Ω · mm ²
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 for further information on this material.