

# Data Sheet: Aluminium A380

(AlSi8Cu3)

## Alternative Designations

Standard	EN	AFNOR	UNS
Designation	EN AC-46500	A-S9U3A-Y4	A13800

## Details

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.

## Key Features

Excellent machinability • Easy casting • Hot cracking resistance

## Chemical Composition

Element	Cu	Fe	Mg	Mn	Ni	Si	Sn	Zn	Al
Percentage	3 - 4	≤ 1.3	≤ 0.1	≤ 0.5	≤ 0.5	7.5 – 9.5	≤ 0.35	≤ 3	80.3 – 89.5

## Mechanical Properties

Property	Yield strength [MPa]	Ultimate tensile strength [MPa]	Elongation [%]	Hardness
Value	159	324	2.5	80

## Physical Properties

Property	Value
Density [g/cm <sup>3</sup> ]	2.76
Module of elasticity [GPa]	71.0
Electrical conductivity (S/m)	1.56e+7
Coefficient of thermal expansion [K <sup>-1</sup> · 10 <sup>-6</sup> ]	21.1
Thermal conductivity [W/m · K]	109
Specific heat capacity [J/kg · K]	963

## Reference

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