Xometry

Manufacturing On Demand

Data Sheet: Aluminium 3.1645

(AlCu4PbMgMn)

Alternative Designations

Standard	EN	ANSI/AA	UNS	JIS	SIS	UNE
Designation	EN-AW2007	AA2007	A92007	A2007	4355	L-3121

Details

This is a short chipped aluminium alloy containing between 4.0 – 5.0% copper. It is very suitable for high machining speeds and ideal for threading. In addition to copper, it also contains magnesium and lead. This material is commonly used for the production of machine parts, bolts, and nuts. However, its copper content gives it low weldability and low resistance to corrosion.

Key Features

Excellent machinability • Heat treatable • Low weldability • Low corrosion resistance

Chemical Composition

Element	Si	Fe	Cu	Mn	Cr	Ni	Zn	Ti	Pb
Percentage	≤ 0,80	≤ 0,80	3.3 - 4.6	0.5 – 0.1	0.10	0.20	0.80	0.20	1.5

Mechanical Properties

Property	Yield strength [MPa]	Ultimate tensile strength [MPa]	Elongation [%]	Hardness
Value	210 – 250	330 – 370	6 – 8	95

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Physical Properties

Property	Value
Density [g/cm³]	2.85
Module of elasticity [GPa]	~ 70
Electrical conductivity [m/Ω · mm²]	18 – 22
Coefficient of thermal expansion [K-1 · 10-6]	23.0
Thermal conductivity [W/m · K]	130 – 160
Specific heat capacity [J/kg · K]	900

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.