Data Sheet

Aluminium 2007 / 3.1645 / Al-CuMgPb

Alternative Designations

EN AW-2007 | AlCu4PbMgMn (ISO) | AA2007 (ANSI/AA) | L-3121 (UNE) | A92007 (UNS) | A2007 (JIS) | 4355 (SIS)

Key Features

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

Description

This is a short chipped aluminium alloy containing between 3.3 – 4.6% 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.

Mechanical Properties

Yield strength	210 – 250 MPa
Tensile strength	370 MPa
Elongation at break	6 – 8%
Hardness	130
Module of elasticity	72.5 GPa

Physical Properties

Density	2.85 g/cm³
Electrical conductivity	18 – 22 m/Ω · mm²
Coefficient of thermal expansion	23 K-1 · 10-6
Thermal conductivity	130 – 160 W/m · K
Specific heat capacity	860 J/kg · K

Chemical Composition

Al	Rest is Al	N	-
Bi	0.2%	Nb	-
C	-	Ni	0.2%
Cd	-	O	-
Co	-	P	1.5%
Cr	0.1%	Pb	0.8 – 1.5%
Cu	3.3 – 4.6%	S	-
Fe	≤ 0,80%	Si	≤ 0,80%
H	-	Sn	0.2%
Mg	0.4 – 1.8%	Ti	0.2%
Mn	0.5 – 0.1%	V	-
Mo	-	Zn	0.8%

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.