



Aluminium 7075 / 3.4365 / Al-Zn6MgCu

Alternative Designations

EN-AW7075 | Al-Zn6MgCu (ISO) | AA7075 (ANSI/AA) | 2L95 (BS) | A-Z5GU (AFNOR) | L-3710 (UNE) | A97075 (UNS) | A7075 (JIS) | ZG62 (CSA)

Key Features

High strength • Tough • Resistant to fatigue • Excellent machinability

Description

Aluminium 7075 is zinc and magnesium alloyed aluminium with good strength and stress corrosion cracking resistance. With a density of only 2.81 g/cm³, it is also one of the lightest alloys in commercial production. It is the primary alloying element. It has high strength (540 MPa), toughness, and excellent resistance to fatigue. The surface can either be mill finished or brush finished. It has very good machinability. It is extensively used in the structural parts for aircraft.

Mechanical Properties

Yield strength	145 – 475 MPa
Tensile strength	275 – 540 MPa
Elongation at break	2 – 10%
Hardness	55 – 163
Module of elasticity	72 GPa

Chemical Composition

Al	Rest is Al	N	-
Bi	-	Nb	-
C	-	Ni	-
Cd	-	O	-
Co	-	P	-
Cr	0.18 – 0.28%	Pb	-
Cu	1.2 – 2.0%	S	-
Fe	0.5%	Si	0.4%
H	-	Sn	-
Mg	2.1 – 2.9%	Ti	0.2%
Mn	0.3%	V	-
Mo	-	Zn	5.1 – 6.1%

Physical Properties

Density	2.81 g/cm ³
Electrical conductivity	19 – 23 m/Ω · mm ²
Coefficient of thermal expansion	23.6 K ⁻¹ · 10 ⁻⁶
Thermal conductivity	130 W/m · K
Specific heat capacity	960 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.