Aluminum 7075

AlZnMgCu1.5 / 3.4365 / 2L95/L160 / A-ZGU

Aluminum 7075 is one the strongest aluminum alloys. Its high yield strength and its low density make the material a fit for applications such as aircraft parts or parts subject to heavy wear. While it is less corrosion resistant than other alloys, its strength more than justifies the downsides.

Tolerance and Standard

Max. Size	Tolerance	Wall Thickness
30 * 22 * 10cm	0.125mm	0.75mm

Pros and Cons

High strength
High toughness
Good ductility

More expensive
Moderate corrosion resistance

Applications

AEROSPACE | AUTOMOTIVE | ROBOTICS | ELECTRONICS

Chemical Composition

Composition	Percentage, %
Aluminum(Al)	89.60
Zinc(Zn)	5.70
Magnesium(Mg)	2.30
Copper(Cu)	1.50
Ferrous(Fe)	0.41
Chromium(Cr)	0.18
Silicon(Si)	0.13
Manganese(Mn)	0.13
Titanium(Ti)	0.05

Physical Properties

Characteristic	Metric
Tensile strength	572 MPa
Yield strength	503 MPa
Shear strength	331 MPa
Fatigue strength	159 MPa
Modulus of elasticity	71.7 GPa
Shear modulus	26.9 GPa
Linear thermal expansion coefficient	23.6 μm/m·k
Density	2.82 g/cm³
Melting temperature	475 - 635 °C