

# Aluminium Alloy AA 7075 – T651 Data Sheet



## DESCRIPTION

Aluminium Alloy **AA-7075** is capable of high strength as developed by heat treating. It also has excellent properties at low temperatures. **AA-7075** is an Aluminium, with Zinc as the primary alloying element. It is strong, with a strength comparable to many steels, and has good fatigue strength and average machinability. It has lower resistance to corrosion than many other Aluminium alloys, but has significantly better corrosion resistance than the 2000 alloys. Its relatively high cost limits its use. Due to its high strength, low density, thermal properties, and its ability to be highly polished, **7075** is widely used in mold tool manufacturing.

## APPLICATIONS

**AA-7075** is typically used in:

- All-terrain vehicle
- Aerospace and defense applications
- Aircraft fittings
- Bike frames and components

## CHEMICAL COMPOSITION

Element	Composition %
Silicon (Si)	0.10 - 0.40
Iron (Fe)	0.10 - 0.50
Copper (Cu)	1.20 - 2.00
Manganese (Mn)	0.05 - 0.30
Magnesium (Mg)	2.10 - 2.90
Zinc (Zn)	5.10 - 6.10
Titanium (Ti)	0.01 - 0.20
Chromium (Cr)	0.15 - 0.20
Gallium (Ga)	0.01 - 0.05
Vanadium (V)	0.01 - 0.06
Aluminium (Al)	Balance

## SIZES RANGE FOR AA 7075

We stock Aluminium Alloy **AA-7075** at our warehouses in Dubai & Sharjah. Please contact us on [sales@dinco.ae](mailto:sales@dinco.ae) with your inquiries or call: [04-3312182](tel:04-3312182) or visit [www.dinco.ae](http://www.dinco.ae)

## SUPPLIED FORMS

At Dinco Trading LLC we stock/offer Aluminium Alloy **AA-7075** in the form of - Flat sheet, plates.

## MECHANICAL PROPERTIES

Property	Value
Proof Stress	440 Min Mpa
Tensile Strength	572 Mpa
Elongation at 50 mm	4 Min %
Hardness Brinell	155 HB

## WELDABILITY

Weldability - Gas: Poor

Weldability - Arc: Poor

Brazability: Poor

Weldability - Resistance: Excellent

## FABRICATION

Machinability: Good

Workability – Cold: Poor

## GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2.81 g/cm <sup>3</sup>
Melting Point	635 °C
Thermal Expansion	23.6 x 10 <sup>-6</sup> /K
Modulus of Elasticity	72.0 GPa
Thermal Conductivity	130 W/m.K
Electrical Resistivity	0.0515 x 10 <sup>-6</sup> Ω .m

Please note that Mechanical Properties shown are for **T651\*** temper. These properties can change depending on the form of material used. Thicker plate may exhibit lower strengths and elongation than the numbers listed herein.

\***T651** - Solution heat treated, stress relieved by stretching then artificially aged.