

# Aluminium Alloy AA 6082 – T651 Data Sheet



## DESCRIPTION

Aluminium Alloy **AA-6082** is a medium strength alloy with excellent corrosion resistance. It has the highest strength of the 6000 series alloy. AA6082 is known as a structural alloy. In plate/sheet form **AA-6082** is most commonly used for machining. As a relatively new alloy, the higher strength of **AA-6082** has seen it replace **AA-6061** in many applications. **AA-6082** is now superseding low carbon steels in structural applications where the benefits of lightness, corrosion resistance and ease of fabrication can be exploited.

## APPLICATIONS

**AA-6082** is typically used in:

- Cargo containers
- Highly stressed applications
- Bridges
- Structural members
- Trusses
- Transportation equipment
- Machines components

## CHEMICAL COMPOSITION

Element	Composition %
Manganese (Mn)	0.40 - 1.00
Iron (Fe)	0.00 - 0.50
Magnesium (Mg)	0.60 – 1.20
Silicon (Si)	0.70 – 1.30
Copper (Cu)	0.00 - 0.10
Zinc (Zn)	0.00 - 0.20
Titanium (Ti)	0.00 - 0.10
Chromium (Cr)	0.00-0.25
Others (Total)	0.00 - 0.15
Other (Each)	0.00 - 0.05
Aluminium (Al)	Balance

## SUPPLIED FORMS

At Dinco Trading LLC we stock/offer Aluminium Alloy **AA-6082** in the form of - Flat sheet, plates.

## MECHANICAL PROPERTIES

Property	Value
Proof Stress	255 Min Mpa
Tensile Strength	300 Mpa
Elongation at 50 mm	9 Min %
Hardness Brinell	91 HB

## WELDABILITY

Weldability - Gas: Good  
Weldability - Arc: Good  
Brazability: Good  
Weldability - Resistance: Good

## FABRICATION

Machinability: Good  
Workability – Cold: Good

## GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2.70 g/cm <sup>3</sup>
Melting Point	555 °C
Thermal Expansion	24 x 10 <sup>-6</sup> /K
Modulus of Elasticity	70.0 GPa
Thermal Conductivity	180 W/m.K
Electrical Resistivity	0.038 x 10 <sup>-6</sup> Ω .m

Please note that Mechanical Properties shown are for **T651\*** temper.

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

## SIZES RANGE FOR AA-6082

We stock Aluminium Alloy **AA-6082** 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)