

DESCRIPTION

Aluminium Alloy 6082 is a medium strength alloy with excellent corrosion resistance. It has the highest strength of the 6000 series alloys. Alloy 6082 is known as a structural alloy. In plate form, 6082 is the alloy most commonly used for machining. As a relatively new alloy, the higher strength of 6082 has seen it replace 6061 in many applications. The addition of a large amount of manganese controls the grain structure which in turn results in a stronger alloy. AA 6082 is now superseding low-carbon steels in structural applications where the benefits of lightness, specific stiffness, 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
- Machined components

Please note that Mechanical Properties shown are for T-651 temper*

*T-651 - Solution heat treated, stress relieved by stretching then artificially aged

CHEMICAL COMPOSITION

Element	Composition %
Silicon (Si)	0.70 – 1.30
Magnesium (Mg)	0.60 – 1.20
Manganese (Mn)	0.40 – 1.0
Iron (Fe)	0.0 – 0.50
Chromium (Cr)	0.0 – 0.25
Zinc (Zn)	0.0 – 0.20
Titanium (Ti)	0.0 – 0.10
Copper (Cu)	0.0 – 0.10
Others (Total)	0.0 – 0.15
Other (Each)	0.0 – 0.05
Aluminium (Al)	Balance

SUPPLIED FORMS

At **Dinco Trading Co** we stock Aluminium Alloy 6082 in the form of sheets/plates

MECHANICAL PROPERTIES

Property	Value
Proof Stress	260 Min MPa
Tensile Strength	310MPa
Elongation at 50 mm	10 Min %
Hardness Brinell	94 HB

WELDABILITY

Weldability – Gas: Good
 Weldability – Arc: Good
 Brazeability: Good
 Weldability – Resistance: Good

FABRICATION

Machinability: Good
 Workability – Cold: Good

GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2.70 g/cm ³
Melting Point	555 °C
Thermal Expansion	24 ×10 ⁻⁶ /K
Modulus of Elasticity	70GPa
Thermal Conductivity	180 W/m.K
Electrical Resistivity	0.038 ×10 ⁻⁶ Ω.m

SIZES RANGE FOR AA 6082 - T651

We stock Aluminium Alloy 6082 - T651 at our warehouse in the UAE.

Please contact us on sales@dinco.ae with your inquiries or call: 06-5432452