

ALUMINIUM

6082 - T6



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Aluminium 6082-T6 is a medium-strength alloy with excellent corrosion resistance. It belongs to the 6000 series and is known for its good formability, weldability and machinability. The T6 temper involves solution heat-treatment and artificial aging, which gives it a balance of strength and ductility. It's often used in structural applications due to its high strength, and it's also known for tight coils of swarf when chip breakers are used in machining.

KEY FEATURES

- Good weldability with both TIG and MIG
- Good formability in annealed condition
- Excellent corrosion resistance
- Good machinability
- Medium strength alloy

CHEMICAL PROPERTIES

Aluminium (Al)	Silicone (Si)	Magnesium (Mg)	Manganese (Mn)	Iron (Fe)	Chromium (Cr)	Zinc (Zn)	Titanium (Ti)
97.4-98.7%	0.7-1.3%	0.6-1.2%	0.4-1%	0.5%	0.25%	0.2%	0.1%

MECHANICAL PROPERTIES

Tensile strength (N/mm ²)	290
Yield strength (N/mm ²)	240
Elongation (% at break)	12
Proof stress (MPa)	170
Hardness - Brinell (HB) max	95

PHYSICAL PROPERTIES

Density (kg/m ³)	270	
Modulus of elasticity (Gpa)	70	
Mean coefficient of thermal expansion	0-100°C (µm/m/°C)	23.2
	0-350°C (µm/m/°C)	24.1
	0-538°C (µm/m/°C)	24.9
Thermal conductivity	at 100°C (W/m.K)	190
	at 500°C (W/m.K)	230
Specific Heat 0-100°C (J/kg.K)	91	
Electrical conductivity (IACS %)	59-67	
Melting point (°C)	555	

MARKET SECTORS



Construction & Architecture

Beams, columns, framework, facade systems, roofing



Automotive Industry

Chassis components, body panels, wheels



Marine Equipment

Boat hulls, superstructures, offshore platforms



Electrical Industry

Busbars, conductors, electrical enclosures



Manufacturing & Industrial

Machines parts, jigs, fixtures, equipment frames



Aerospace Industry

Aircraft components, military vehicles, armour plating