ALUMINIUM

6063 - T6

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Aluminium 6063-T6 is a medium-strength alloy in the Al-Mg-Si series, known for its excellent extrudability, moderate strength, good weldability and corrosion resistance. It's widely used for extruded architectural profiles and decorative finishes. The T6 temper indicates that the metal has been solution heat-treated and artificially aged to achieve a specific level of mechanical properties.

KEY FEATURES

- Excellent weldability using conventional ways
- Good machinability
- Easily formed and extruded
- Good corrosion resistance
- Suitable for complex shapes and profiles

CHEMICAL PROPERTIES

Magnesium (Mg)	Silicone (Si)	Iron (Fe)	Manganese (Mn)	Zinc (Zn)	Copper (Cu)	Titanium (Ti)	Chromium (Cr)	Other Elements	Aluminium (Al)
0.45-0.9%	**0.2-0.6%**	**0.35%**	**0.1%**	**0.1%**	**0.1%**	**0.1%**	**0.1%**	**0.05%**	**rest**

MECHANICAL PROPERTIES

Tensile strength (N/mm²)	**180**
Yield strength (N/mm²)	**110**
Elongation (% at break)	**8**
Proof stress (MPa)	**50**
Hardness - Brinell (HB) max	**60**

PHYSICAL PROPERTIES

Density (kg/m³)		**270**
Modulus of elasticity (Gpa)		**69**
Mean coefficient of thermal expansion	0-100ºC (µm/m/ºC)	**23.6**
	0-350ºC (µm/m/ºC)	**24.6**
	0-538ºC (µm/m/ºC)	**25.3**
Thermal conductivity	at 100ºC (W/m.K)	**210**
	at 500ºC (W/m.K)	**250**
Specific Heat 0-100ºC (J/kg.K)		**92**
Electrical conductivity (IACS %)		**55**
Melting point (ºC)		**600**

MARKET SECTORS

Construction & Architecture
Beams, columns, scaffolding, window frames, door frames

Automotive Industry
Automotive trim, roof rails, structural components

Marine Equipment
Hulls, masts, superstructures, boat components

Electrical Industry
Electrical enclosures, housings, heat sinks

Manufacturing & Industrial
Extrusions, profiles, jigs, fixtures, tooling

Aerospace Industry
Interior panels, seat frames, components, military vehicles