

## Alloy Specification Sheet – 6063



Alloy 6063 is a medium strength alloy commonly referred to as an architectural alloy, normally used for the extrusion of intricate profile designs.

Element	% Present
Silicon	0.2 to 0.6
Iron	0.35
Copper	0.1
Manganese	0.1
Magnesium	0.45 to 0.9
Zinc	0.1
Titanium	0.1
Chromium	0.1
Aluminium	Balance

6063 provides a good surface finish, high corrosion resistance, and is well suited to welding and to anodising.

Mechanical Property	T4	T6
Proof Stress 0.2% (Mpa)	90	210
Tensile Strength (Mpa)	160	245
Shear Strength (Mpa)	110	150
Elongation A5 (%)	21	14
Hardness Vickers (HV)	50	80

Physical Property	Value
Density	2.71 g/cm <sup>3</sup>
Melting Point	600°C
Modulus of Elasticity	67 GPa
Electrical Resistivity	0.035 x 10 <sup>-6</sup> Ωm
Thermal Conductivity	180 W/mK
Thermal Expansion	23 x 10 <sup>-6</sup> / K

Fabrication Process	Rating
Workability – Cold	Average
Machinability	Average
Weldability – Gas	Excellent
Weldability –Arc	Excellent
Weldability –Resistance	Excellent
Brazability	Excellent
Solderability	Good

Most commonly available as T6 temper, but proves ideal for many forming applications in T4 condition.

### Applications:-

- Architectural
- Intricate Extrusions
- Window Frames
  - Doors
- Shop Fittings

