

## Alloy Specification Sheet – 6063A



Alloy 6063A is a variation of 6063 with greater strength, but retains the same good surface finish qualities and affinity for anodising.

Element	% Present
Silicon	0.3 to 0.6
Iron	0.15 to 0.35
Copper	0.1
Manganese	0.15
Magnesium	0.6 to 0.9
Zinc	0.15
Titanium	0.1
Chromium	0.05
Aluminium	Balance

6063A is used in the same applications as 6063 but specified where a greater resistance to deformation is required.

Mechanical Property	T4	T6
Proof Stress 0.2% (Mpa)	90	190
Tensile Strength (Mpa)	150	230
Shear Strength (Mpa)	110	150
Elongation A5 (%)	12	7
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

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

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

### Applications:-

- Architectural
- Intricate Extrusions
- Window Frames
  - Doors
- Shop Fittings
- Road & Rail Transport
- Extreme Sports Equipment

