

SHANGHAI C&N INDUSTRIAL GROUP LIMITED

Aluminium Alloy 6063 - T6 tubes specifications

SPECIFICATIONS

Commercial	6063
EN	6063

Aluminium Alloy 6063

Aluminium alloy 6063 is a medium strength alloy commonly referred to as an architectural alloy. It is normally used in intricate extrusions.

It has a good surface finish, high corrosion resistance, is readily suited to welding and can be easily anodised. Most commonly available as T6 temper, in the T4 condition it has good formability.

Applications

6063 is typically used in:

Architectural applications

Extrusions

Window frames

Doors

Shop fittings

Irrigation tubing

In balustrading the rails and posts are normally in the T6 temper and formed elbows and bends are T4. T4 temper 6063 aluminium is also finding applications in hydroformed tube for chassis.

ALLOY DESIGNATIONS

Aluminium alloy 6063/6063A corresponds to the following standard designations and specifications **but may not be a direct equivalent:**

AA6063

Al Mg0.7Si

GS10

AlMgSi0.5

A-GS

3.32206

GB/T-6892-2006

ASTM B210

ASTM B221

ASTM B241 (Pipe- Seamless)

ASTM B345 (Pipe- Seamless)

ASTM B361

ASTM B429

ASTM B483

ASTM B491

CHEMICAL COMPOSITION

GB/T 6892-2006 / BS EN 573-3: 2009 Alloy 6003

Element	% Present
Magnesium (Mg)	0.45 - 0.90
Silicon (Si)	0.20 - 0.60
Iron (Fe)	0.0 - 0.35
Others (Total)	0.0 - 0.15
Chromium (Cr)	0.0 - 0.10
Copper (Cu)	0.0 - 0.10
Titanium (Ti)	0.0 - 0.10
Manganese (Mn)	0.0 - 0.10
Zinc (Zn)	0.0 - 0.10
Other (Each)	0.0 - 0.05
Aluminium (Al)	Balance

TEMPER TYPES

The most common tempers for 6063 aluminium are:

- O - Soft
- T6 - Solution heat treated and artificially aged

Property	Value
Density	2.70 g/cm ³
Melting Point	655 °C
Thermal Expansion	23.5 x10 ⁻⁶ /K
Modulus of Elasticity	69.5 GPa
Thermal Conductivity	201 W/m.K
Electrical Resistivity	52 % IACS
Electrical Resistivity	0.033 x10 ⁻⁶ Ω .m

MECHANICAL PROPERTIES

BS EN 755-2
Tube
Up To 25mm Wall Thickness

Property	Value
Proof Stress	170 Min MPa
Tensile Strength	215 Min MPa
Elongation A50 mm	8 Min %
Hardness Brinell	75 HB
Elongation A	10 Min %