HOLME DODSWORTH METALS LIMITED
www.holmedodsworth.com

Grade 6063 aluminium is a medium strength alloy with additions of magnesium and silicon. Commonly utilised as an architectural alloy it has a good formability in manufacture and lends itself to intricate extrusions and sections.

It is heat treatable and offers good mechanical property's, it also has a high corrosion resistance and is readily suited to welding. It is typically produced with a good surface finish that lends itself to excellent anodising characteristics.

Chemical Composition

Aluminium	Rem	Silicon	0.2-0.6%
Copper	0.10% max	Iron	0.35% max
Manganese	0.10% max	Magnesium	0.45-0.9%
Zinc	0.10% max	Titanium	0.10% max
Chromium	0.10% max	Total Others	0.15% max

Related Specifications

6063	Al Mg0.7Si	HE9
AlMgSi0.5	A-GS	3.32206

Key Features

- Easily anodised
- Readily weldable
- Good corrosion resistance
- Good surface finish
- Reasonable strength

Typical Physical Properties

Melting Range	580-660°C
Density	2.70 g/cm³
Thermal conductivity	197 W/m°K
Thermal expansion coefficient	24 x 10^{-6}
Electrical Conductivity	49.3 IACS
Electrical resistivity	0.035 microhm m
Modulus of elasticity	69 GPa

Fabrication Properties

Cold Formability	Average
Machinability	Average
Soldering	Good
Brazing	Excellent
Gas Shielded Arc Welding	Excellent
Manual Metal Arc Welding	Excellent
Resistance Welding	Excellent

Typical Applications

6063 is typically used in architectural and industrial applications as complex extrusions for window frames, doors frames, roofs, signs, shop fittings, stair balustrades rails and posts, irrigation tubing and hydro-formed tube for chassis.

This technical information is given by Holme Dodsworth Metals without charge and the user shall employ such information at their own discretion and risk. For more detailed technical advice on temper selection, fabrication, joining, machining, physical and mechanical data please contact us as space does not permit the listing of every feature of the material.