

Aluminium Alloy - 1050 'O' H111

SPECIFICATIONS

Commercial	1050
EN	1050

Aluminium alloy 1050 is a popular grade of aluminium for general sheet metal work where moderate strength is required.

Alloy 1050 is known for its excellent corrosion resistance, high ductility and highly reflective finish.

Applications - Alloy 1050 is typically used for:

- Chemical process plant equipment
- Food industry containers
- Pyrotechnic powder
- Architectural flashings
- Lamp reflectors
- Cable sheathing

CHEMICAL COMPOSITION

BS EN 573-3:2009 Alloy 1050	
Element	% Present
Iron (Fe)	0.0 - 0.40
Silicon (Si)	0.0 - 0.25
Zinc (Zn)	0.0 - 0.07
Titanium (Ti)	0.0 - 0.05
Manganese (Mn)	0.0 - 0.05
Copper (Cu)	0.0 - 0.05
Magnesium (Mg)	0.0 - 0.05
Other (Each)	0.0 - 0.03
Aluminium (Al)	Balance

ALLOY DESIGNATIONS

Aluminium alloy 1050 also corresponds to the following standard designations and specifications **but may not be a direct equivalent:**

- AA1050A
- S1B
- A91050

TEMPER TYPES

The most common tempers for 1050 aluminium are:

- O - Soft

SUPPLIED FORMS

- Plate
- Sheet
- Coil

GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2.71 g/cm ³
Melting Point	650°C
Thermal Expansion	24 x10 ⁻⁶ /K
Modulus of Elasticity	71 GPa
Thermal Conductivity	222 W/m.K
Electrical Resistivity	0.0282 x10 ⁻⁶ Ω .m

MECHANICAL PROPERTIES

BS EN 485-2:2008 sheet 0.2mm to 6.00mm	
Property	Value
Proof Stress	20 Min MPa
Tensile Strength	65 - 95 MPa
Hardness Brinell	20 HB

Properties above are for materials in the soft 'O' condition

WELDABILITY

When welding 1050 to itself or an alloy from the same subgroup the recommended filler wire is 1100. For welding to alloys 5083 and 5086 or alloys from the 7XXX series, the recommended wire is 5356. For other alloys use 4043 filler wire.

FABRICATION

Workability – Cold: Excellent
 Machinability: Poor
 Weldability – Gas: Excellent
 Weldability – Arc: Excellent

Weldability – Resistance: Excellent
 Brazability: Excellent
 Solderability: Excellent.

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