

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

Element	% Present
Manganese (Mn)	0.0 - 0.05
Iron (Fe)	0.0 - 0.40
Copper (Cu)	0.0 - 0.05
Magnesium (Mg)	0.0 - 0.05
Silicon (Si)	0.0 - 0.25
Zinc (Zn)	0.0 - 0.07
Titanium (Ti)	0.0 - 0.05
Aluminium (Al)	Balance

ALLOY DESIGNATIONS

Aluminium alloy 1050 also corresponds to the following standard designations and specifications:

- AA1050A
- S1B
- A91050

TEMPER TYPES

The most common tempers for 1050 aluminium are:

- H14 - Work hardened by rolling to half hard, not annealed after rolling

SUPPLIED FORMS

- Plain sheet
- Plain sheet with a PVC coating on one side
- Stucco sheet
- Stucco sheet with a PVC coating on one side
- Shate

- Sheet

PHYSICAL PROPERTIES

Property	Value
Density	2.71 Kg/m 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

Property	Value
Proof Stress	85 MPa
Tensile Strength	100 MPa
Elongation	12 %
Shear Strength	60 MPa
Hardness Vickers	30 HV

Properties above are for material in the H14 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 recommend 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

CONTACT

Address:	Please make contact directly with your local service centre, which can be found via the Locations page of our web site
Web:	www.aalco.co.uk

DISCLAIMER

This Data is indicative only and must not be seen as a substitute for the full specification from which it is drawn. In particular, the mechanical property requirements vary widely with temper, product and product dimensions. The information is based on our present knowledge and is given in good faith. However, no liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon.

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