

Aluminium Alloy 1050 H14

Material Data Sheet

Scope

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.

Application

This material is used for chemical process plant equipment, pyrotechnic powder, lamp reflectors, food industry containers, cable sheathing and architectural flashings.

Supplied Forms

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

Alloy Designations

Aluminium alloy 1050 also corresponds to: AA1050A, S1B and A91050.

Temper Types

The most common tempers for 1050 aluminium are: H14 - Work hardened by rolling to half hard, not annealed after rolling.

Fabrication

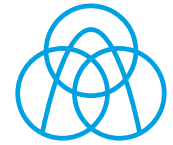
- Solderability: Excellent
- Weldability - Gas: Excellent
- Weldability - Arc: Excellent
- Weldability - Resistance: Excellent
- Brazability: Excellent
- Workability - Cold: Excellent
- Machinability: Poor

Welding

When welding 1050 to itself or an alloy from the same sub-group 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.

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



Mechanical properties at room temperature

Property	Value
Proof Strength	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

Reference data for some physical properties (for guidance only)

Property	Value
Density	2.71 Kg/m ³
Melting Point	650 °C
Thermal Expansion	24 x 10 ⁻⁶ /K
Modulus of Elasticity	71 GPa
Thermal Conductivity	222 W/m.K
Electrical Resistivity	0.0282 x 10 ⁻⁶ Ω .m

Editor

thyssenkrupp Materials (UK) Ltd
Cox's Lane
Cradley Heath
West Midlands
B64 5QU

Important Note

Information given in this data sheet about the condition or usability of materials respectively products are no warranty for their properties, but act as a description.

The information, we give on for advice, comply to the experiences of the manufacturer as well as our own. We cannot give warranty for the results of processing and application of the products.