



TECHNICAL DATA SHEET

1050 Aluminum

Commercial-Purity Aluminum

VTECH
MATERIALS
LIBRARY

Document Control

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Issue Date	2026-04-08	Owner	Engineering
Specification	EN AW-1050A / JIS A1050 / ASTM B209 equivalent	Product Form / UNS	Sheet, foil, and general fabricated stock / AA1050

Engineering use note: Starter-library values are intended for engineering screening and template standardization. Verify against the latest governing specification, drawing, PO, and MTR before production release.

1. General Description

1050 is a commercial-purity aluminum included in the VTECH library for quick material screening and template standardization.

2. Chemical Composition (wt%)

Property	Value
Aluminum (Al)	≥ 99.5
Silicon + Iron (Si+Fe)	≤ 0.40
Copper (Cu)	≤ 0.05
Manganese (Mn)	≤ 0.05
Magnesium (Mg)	≤ 0.05
Zinc (Zn)	≤ 0.05
Titanium (Ti)	≤ 0.03
Others	Low residuals

3. Mechanical Properties

Property	Value
Condition	O/H14 common sheet tempers
Ultimate tensile strength	~65-125 MPa
Yield strength (0.2% offset)	~20-105 MPa
Elongation	Good, temper dependent
Engineering note	Mechanical properties depend strongly on temper

4. Physical Properties

Property	Value
Density	2.71 g/cm3
Elastic modulus	69 GPa
Thermal conductivity	~220 W/m-K
Electrical conductivity	Very high

5. Heat Treatment / Processing

Non-heat-treatable alloy. Strength is controlled by cold work temper rather than precipitation hardening.

6. Corrosion / Environmental Performance

Excellent atmospheric corrosion resistance and very good conductivity. Often selected for reflectors, chemical service, and general sheet fabrication.

7. Key Characteristics

- Very high purity aluminum
- Excellent formability and conductivity
- Low strength compared with alloyed grades

8. Typical Applications

- Reflectors
- Chemical containers
- Nameplates
- General sheet metal parts

9. Standards / Cross-References

EN AW-1050A

JIS A1050

AA1050