

Aluminium Alloy

6061 – T6 Data Sheet



DESCRIPTION

Aluminium alloy 6061 is a medium to high strength heat-treatable alloy and the most widely used of the 6000 series. It combines good mechanical strength with excellent corrosion resistance and very good weldability, with magnesium and silicon as its principal alloying elements.

APPLICATIONS

AA-6061 is typically used in:

- Structural members and frameworks
- Marine fittings and boat hulls
- Truck and trailer components
- Machined components and tooling plate
- Scaffolding and access equipment
- Valves and couplings
- Bicycle and vehicle frames
- General fabrication and welded assemblies

TYPICAL PHYSICAL PROPERTIES

Typical values for guidance – not specified in any standard

Property	Value
Density	2.70 g/cm ³
Melting Point	582°C
Thermal Expansion	23.6 ×10 ⁻⁶ /K
Modulus of Elasticity	69 GPa
Thermal Conductivity	167 W/m.K
Electrical Resistivity	0.040 ×10 ⁻⁶ Ω.m

CHEMICAL COMPOSITION

EN 573-3:2007, Table 1 · EN AW-6061

Element	Composition %
Silicon (Si)	0.40 – 0.8
Iron (Fe)	0.7 Max
Copper (Cu)	0.15 – 0.40
Manganese (Mn)	0.15 Max
Magnesium (Mg)	0.8 – 1.2
Chromium (Cr)	0.04 – 0.35
Zinc (Zn)	0.25 Max
Titanium (Ti)	0.15 Max
Other (Each)	0.05 Max
Others (Total)	0.15 Max
Aluminium (Al)	Remainder

SIZES RANGE FOR AA 6061 T6

We stock Aluminium Alloy 6061 T6 in Plain sheets at our warehouses in Dubai, Abu Dhabi & Sharjah. Please contact us on sales@dinco.ae with your inquiries or call: 04-3312182 or visit www.dinco.ae

MECHANICAL PROPERTIES

EN 485-2:2016, Table 46 · EN AW-6061, temper T6

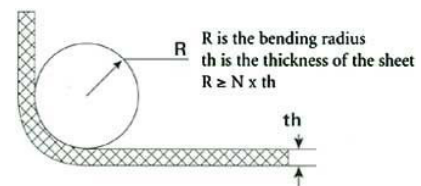
Thickness mm	Rm	Rp0.2	A50	HBW
0.4–1.5	290 min	240	6	88
over 1.5–3.0	290 min	240	7	88
over 3.0–6.0	290 min	240	10	88

Rm and Rp0.2 in MPa; A50 elongation in %; Rp0.2 and A50 are minima. HBW hardness for information only.

MINIMUM BEND RADIUS

EN 485-2:2016 · EN AW-6061, temper T6 · inside radius as a multiple of thickness

Thickness mm	90° bend	180° bend
0.4–1.5	2.5 × t	—
over 1.5–3	3.5 × t	—
over 3–6	4 × t	—
over 6–12.5	5 × t	—



These are inside radii, not pin diameters. A dash means bending is not recommended at that thickness – sheets may crack upon bending.

THICKNESS TOLERANCE

EN 485-4:1993 cold-rolled ≤6 mm · EN 485-3:2003 hot-rolled >6 mm

Thickness mm	1219 mm	1500 mm	2000 mm
0.5	±0.05	±0.06	±0.07
0.8	±0.07	±0.08	±0.09
1.0	±0.08	±0.09	±0.10
1.5	±0.11	±0.12	±0.14
3.0	±0.15	±0.17	±0.19
4.0	±0.20	±0.22	±0.23
5.0	±0.22	±0.24	±0.25

† hot-rolled plate to EN 485-3; thinner gauges are cold-rolled to EN 485-4. Measured disregarding 10 mm from the edges.