

Why choose aluminium?

Aluminium exhibits a unique combination of properties that make it one of the most versatile engineering and construction material on the market.

Aluminium's useful properties include:

Light Weight: Aluminium is one of the lightest commercial metals, having approximately one-third the density of iron or steel. It significantly reduces shipping and handling costs, and is ideal for use in aircrafts, trucks and rolling equipment.

Strength & Resilience: Aluminium vastly outperforms other materials in its strength-to-weight ratio, which can be adapted to the application by modifying the composition of its alloys. Unlike steel, aluminium increase in tensile strength at low temperatures and bears no risk of fracture. It also behaves elastically under static and dynamic loading conditions, and has the ability to resume its shape and size.

Corrosion Resistance: Aluminium develops a thin, oxidised surface film when exposed to air, creating a natural barrier to corrosion.

Ease of Fabrication: Naturally easy to manipulate, aluminium offers optimal design flexibility to engineers and architects. It can be fabricated into a wide variety of forms, including: foil, sheets, geometric shapes, rods and wires, and is a popular choice for complex hollow extrusion. High machinability and plasticity make it ideal for cutting, drilling, punching, hammering and bending. Aluminium is also suitable for almost any method of joining, including: riveting, welding, brazing, soldering clipping, crimping, adhesive bonding and interlocking joints.

High Conductivity: Aluminium is a highly efficient conductor of heat and electricity with no danger of sparking against itself or other non-ferrous metals.

High Reflectivity: Aluminium is a highly effective heat barrier, reflecting over 80% of light over the entire range of wavelengths. Applied to windows and doors, it significantly improves thermal efficiency.

Non Toxic: Aluminium is non-toxic, with a surface, which is smooth, easily washable and hygienic.

Attractive Finish: Aluminium has a naturally attractive metallic appearance, which can be enhanced by polishing, embossing, sand blasting and wire brushing. It also readily accepts a variety of chemical, electrochemical and paint surface finishes.

Environmentally Friendly: Aluminium is 100% recyclable with no downgrade in properties. The recycling process is highly economical, requiring only 5% of the energy originally used for smelting.

Aluminium Properties – Atomic Number 13. Density 2.7 g -3 at 20 ° C
Melting Point 660.4° C. Boiling Point 2467° C. Mass 2.7 x 10⁻³ kg/3.