

Aluminium

April 10, 2026 • vajiramandravi.com



Aluminium Latest News

New research has found aluminium can be made to behave in the same way that makes transition metals such as palladium, rhodium, and platinum.

About Aluminium

- It is a chemical **element with symbol Al** and **atomic number 13**.
- It is **classified as a post-transition metal**,
- Aluminium Ore **derived from bauxite**, is one of the most abundant, versatile, and strategically important metals in the world.
- The transformation of bauxite into aluminium is a two-stage industrial process:
 - **Bayer Process:** The raw bauxite is first **crushed and treated with sodium hydroxide** to separate **aluminum hydroxide**. This is then calcined (heated strongly) to produce alumina (Al_2O_3).
 - **Hall- Héroult Process:** The alumina is **smelted using electrolytic reduction**, requiring enormous amounts of electricity, which makes aluminium one of the most energy-intensive metals to produce.

Properties of Aluminium

- It is a hard, strong, silvery-white metal with low density.
- It has **high thermal conductivity**, excellent corrosion resistance.
- It has high malleability and ductile properties.
- **Lightweight & corrosion-resistant:** Ideal for transportation and construction.
- **Recyclable:** Retains its original properties and requires only 5% of the energy compared to primary production.

Applications of Aluminium

- **Transport:** Aircraft, automobiles, ships, and rail coaches.
- **Household & Packaging:** Utensils, appliances, and aluminium foils.
- **Infrastructure:** Doors, windows, screens, and cladding.
- **Electrical:** Good conductor, used in transmission lines.
- **Strategic Applications:** Defence, nuclear industries, and aerospace.

Source: **TH**

Source: <https://vajiramandravi.com/current-affairs/aluminium/>

© Vajiram & Ravi. For personal use only.