

BAUXITE

The essential raw material for aluminum and a more sustainable future

Bauxite is the primary raw material used to produce alumina for aluminum – a metal that enables lightweight transport, infrastructure, packaging and many low-carbon technologies.

TAKRAF



AT A GLANCE



Primary raw material used to produce alumina, which is converted into aluminum.



Supports lightweight, durable applications across industries.



Highly recyclable with a closed-loop value chain.



Important for transport, construction, infrastructure and renewable energy.



Demand driven by global production of aluminum.

WHERE IS BAUXITE FOUND?



Major reserves and production
(U.S. Geological Survey, p. 50-51, 2026)



Bauxite occurs in large deposits in tropical and subtropical regions, typically near the surface.

BAUXITE MATTERS FOR ALUMINUM



Lightweight and strong
Enables high performance with lower weight.



Corrosion resistant
Aluminium products withstand harsh environments.



Highly recyclable
Aluminium can be recycled again and again.



Versatile applications
Used in vehicles, buildings, power infrastructure and packaging.



Essential for a lower-carbon economy
Enables solutions for a more sustainable world.

FROM BAUXITE TO ALUMINA - THE BAYER PROCESS

1. MINING



Extraction of bauxite ore.

2. COMMINUTION



Size reduction of the ore.

3. DIGESTION



Bauxite reacts with caustic soda at high temperature.

4. CLARIFICATION



Separation of liquor from insoluble residue.

5. PRECIPITATION



Alumina hydrates precipitated from solution.

6. CALCINATION



Heating removes moisture to produce pure alumina.

7. ALUMINA



High-purity alumina ready for smelting.

KEY CHALLENGES



Efficient material handling and logistics
Moving large volumes reliably and safely.



Water management and residue handling
Responsible use and management of resources.



Energy use in downstream processing
Reducing energy intensity and emissions.



Sustainable project development
Long-term value creation with environmental and social responsibility.

GREATER GROUP CAPABILITIES



Mining



Minerals processing



Extractive metallurgy



Product handling

TAKRAF

DELKOR

tenova



From bauxite to alumina and aluminum – enabling a lightweight, corrosion resistant and recyclable material for the future