

ALUMINA-BAUXITE

INVESTMENT OPPORTUNITIES

WORLD-CLASS RESOURCE PROVINCE | SECURE INVESTMENT LOCATION
WORLD-LEADING GEOSCIENTIFIC DATA | GLOBAL MINING SERVICES INDUSTRY

Alumina-HPA

- HPA project
- ⊠ HPA plant

Bauxite-Alumina by Bayer Process

- Mine (operating)
- Deposit
- Prospect
- Occurrence
- ⊠ Refinery

- Highway / major road
- Town



Western Australia is the second largest producer of alumina and bauxite

- Western Australia produced 12.4 Mt of alumina in 2023–24. Currently Australia produces around one third of the global bauxite at around 98 Mtpa

Bauxite mining

- Bauxite is strip mined from the lateritic profiles of the Darling escarpment. Western Australia produces bauxite from three mining centres – Huntly and Willowdale at Wagerup (Alcoa) and Worsley (South32)

Refining bauxite into alumina

- Bauxite within the Darling Range area is gibbsite dominant, making it easily digestible via the Bayer process, reducing energy and caustic soda costs. The bauxite also has low reactive silica of <2%, which minimises refinery costs (vs global averages of 5–10%)
- Three refineries are currently processing bauxite: Pinjarra, Wagerup (owned by Alcoa), and Worsley (owned by South32, Japan Alumina Associates and Sojitz Alumina)
- In June 2024, Alcoa completed the full curtailment of the Kwinana refinery
- Alumina is shipped via the Kwinana and Bunbury ports

High Purity Alumina (HPA)

- Impact Minerals were awarded federal funding under the Federal Government's Cooperative Research Centre Projects for a pilot plant at Lake Hope. A Pre-Feasibility Study was completed in June 2025 with a maiden ore reserve of 1.7 Mt at 26% Al_2O_3 for 450,000 tonnes of contained Al_2O_3
- Surefire Resources plan to extract HPA from a hard rock source surrounding the high-grade vanadium resource at the Victory Bore Project
- Corella Resources has received Commonwealth Government Trailblazer funding at the Tampu Project to fast track the processing of kaolin to HPA
- Alluminous Pty Ltd is conducting component testing of the HiPurA process plant as part of commissioning the HiPurA HPA micro-plant. Commissioning of the new high-purity laboratory, which will provide rapid assay turnaround essential for pilot-plant operations, has also commenced
- In March 2024, Resource Development Group made improvements in the operation of their pilot plant from red muds that led to the production of HPA >99.93% Al_2O_3 . Red mud is an industrial waste generated when bauxite is processed into alumina via the Bayer process

Western Australia alumina-bauxite statistics data (2023–24 financial year)

\$6,581 m Sales value	12.4 Mt Tonnes sold	\$6,407 m Exports	7,021 Full-time employees	2nd Production world ranking	1.65% (alumina) 7.5% (bauxite) Royalty rate

Totals are for alumina



Department of Mines,
Petroleum and Exploration

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Geological Survey of
Western Australia

Projects with bauxite resources ranked by contained alumina[#] as at August 2025

Mineral Resource Estimates reported in accordance with JORC (2012) unless otherwise stated

Project	Status	Owner	Resources (Mt)	Average grade alumina [^] (%)	Resource date
Worsley	Operating	South32 / Japan Alumina Associates (Australia) / Sojitz Alumina	1076.0	28.72	30/06/2024
Darling Range [*]	Operating	Alcoa of Australia	289.7	31.09	31/12/2024
Julimar West [†]	Exploration	Western Yilgarn	176.9	35.80	26/02/2025
Wuudagu	Pre-Feasibility	VBX Ltd	95.9	39.45	30/05/2025
Darling Range JV	Exploration	Australian Silica Quartz Group / HD Mining and Investment	78.4	32.36	30/06/2020
New Norcia	Exploration	Western Yilgarn	39.3	22.70	15/07/2025
Cardea [†]	Exploration	Western Yilgarn	36.7	33.05	08/07/2025

Resource estimates have been rounded

[#] Resources are alumina extracted by Bayer process

^{*} Mineral Resource is not reported in accordance with JORC 2012 but is CRIRSCO compliant

[†] Mineral Resource is reported in accordance with JORC 2004 and JORC 2012

NOTE: the table does not include projects that have non-compliant Mineral Resource estimates or are inactive projects

Spatial and resource estimates data sourced from WA Mines and Mineral Deposit database (MINEDEX)

Projects with HPA (alumina) resources ranked by contained alumina[^] as at August 2025

Mineral Resource Estimates reported in accordance with JORC (2012) unless otherwise stated

Project	Status	Owner	Resources (Mt)	Average grade alumina [^] (%)	Contained alumina [^] (Mt)	Resource date
Noombenberry	Pre-Feasibility	Surefire Resources	464.60	16.40	76	05/12/2023
Victory Bore	Exploration	Latin Resources	116.70	0.31	41	29/11/2022
Burracoppin	Exploration	Ragusa Minerals	96.01	34.50	33	01/06/2023
Airfield	Exploration	Kula Gold	43.60	35.48	15	20/07/2022
Meckering	Feasibility	Altech Batteries	12.70	29.44	4	11/10/2016
Cadoux	Feasibility	Cadoux	11.27	22.47	3	08/04/2021
Tambellup	Exploration	Halcyon Resources	6.70	36.69	2	26/04/2022
Salazar	Exploration	West Cobar Metals	4.00	29.70	1	08/10/2024
Lake Hope	Scoping	Impact Minerals / Playa One	2.78	25.09	1	19/11/2024

Resource estimates have been rounded

[^] Resources are alumina extracted by various sources

Spatial and resource estimates data sourced from WA Mines and Mineral Deposit database (MINEDEX)

Uses of alumina/HPA

- Alumina is a key commodity in energy transition, and is used in solar, transport, EVs, batteries and cabling
- High-purity alumina (HPA) is a highly refined form of aluminium oxide, characterised by its exceptional purity and versatility. Purity levels start from 99.99% (4N) to 99.9999% (6N) aluminium
- HPA is widely used in high-tech applications such as LEDs, lithium-ion batteries and sapphire glass (used for smartphones and wearable technology)
- HPA is essential in industries that require materials with superior chemical stability, scratch resistance, and the ability to withstand extreme temperatures

For more information

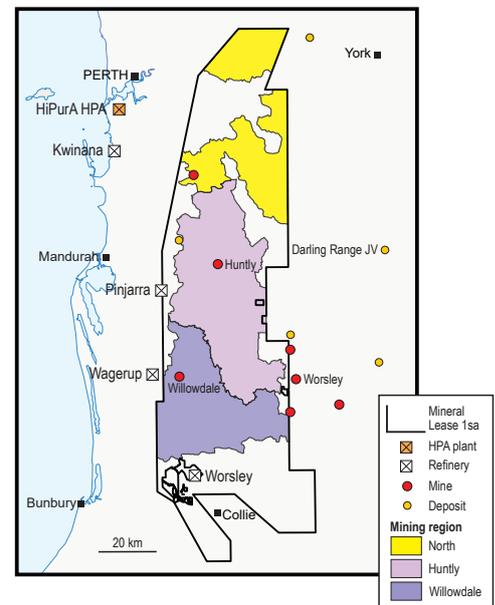
MINEDEX is a spatial and textual database of mining and exploration activity

MINEDEX www.dmpe.wa.gov.au/minedex

GeoVIEW.WA is a free GIS-based spatial viewer

GeoVIEW.WA www.dmpe.wa.gov.au/geoview

DMPE'S MINEDEX, Statistics, and Title and Geoscience Services teams have contributed to the production of this flyer



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