Lithium (Li)

Base Year 2025

World Production

296.4 thousand tonnes of Li_2O (contained)

+18.0%

Brazil Production

20.0 thousand t of Li_2O (contained)

-22.9%

National Highlight

3 mines in production

Trade Balance

↓ Deficit of USD 450.1 million

Exports

USD 192.2 million

-36.5%

Mining Royalties (CFEM)

R$ 7.7 million

-69.8%

% Change 2025 vs 2024



What is Lithium?

Lithium (Li) is the third element of the Periodic Table (atomic number 3) and belongs to the alkali metals group. It has low density and a small ionic radius, and is the most electropositive metal, which is important for battery applications.

It occurs in the structure of more than 200 minerals; in Brazil, the predominant ones are: Spodumene ($LiAlSi_2O_6$), Lepidolite ($K(Li,Al)_3(Si,Al)_4O_{10}(F,OH)_2$), Amblygonite ($(Li,Na)Al(PO_4)(F,OH)$) and Petalite ($LiAlSi_4O_{10}$).

Occurrence

Lithium minerals occur in different types of rocks, such as saline precipitates/evaporites (Chile, Bolivia and Argentina), clay deposits (hectorite) formed by the alteration of volcanic glass/ash (USA and Mexico) and granitic pegmatites (Brazil, Australia and Zimbabwe), among others.

The main occurrence regions in the country are the Northeastern, Eastern and Southern Pegmatite Provinces (Paiva, 1946).

Main Applications

Lithium is consumed in a wide range of applications, from electronics and batteries to ceramics and steel products. Its use also extends to the manufacture of industrial products such as:

- greases;
- ceramics and glass;
- nuclear applications; and
- pharmaceutical use.

Lithium is a critical and strategic mineral, essential for lithium-ion batteries. Its main forms of industrial use are lithium hydroxide (LiOH) and lithium carbonate (Li_2CO_3), precursors used in the production of lithium-ion cells.

1. World Supply

In 2025, according to the United States Geological Survey (USGS), world processed lithium production was about 296.4 thousand tonnes (contained lithium), an increase of 18.0% over the previous year. The main producing countries were Australia (31.0%), China (20.9%) and Chile (18.9%). Brazil was the 6th largest world producer (6.8%), with 20,034 tonnes of lithium (contained).



Lepidolite

$K(LI,AL)_3(SI,AL)_4O_{10}(F,OH)_2$



Spodumene

$LIALSI_2O_6$



Petalite

$LIALSI_4O_{10}$

Table - Main producing countries (contained lithium) - 2025

Country	Production (t)	Share (%)
Brazil	**20,034**	**6.8**
Australia	92,000	31.0
China	62,000	20.9
Chile	56,000	18.9
Zimbabwe	28,000	9.4
Argentina	23,000	7.8
Other Countries	15,380	5.2
Total	**296,414**	**100.0**

Source: Brazil: ANM; other countries: USGS - Mineral Commodity Summaries 2026. Total adjusted with Brazilian data.

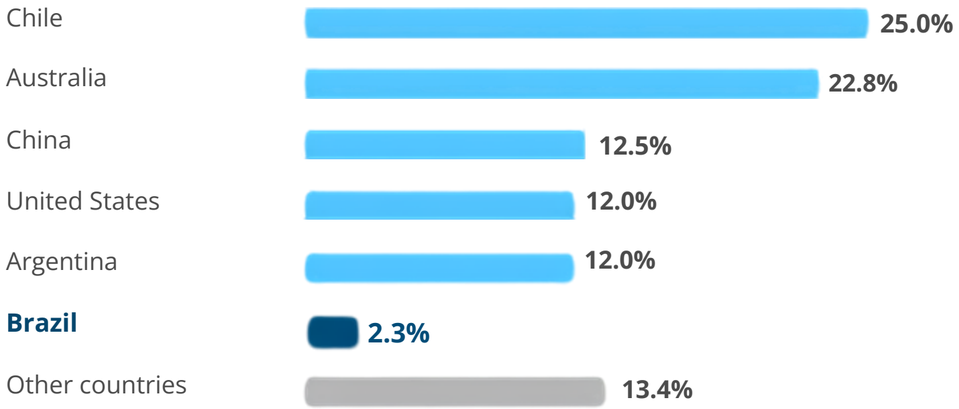
2. Reserves

According to the USGS, world lithium reserves totaled about 36.8 million tonnes (contained Li_2O) in 2025, mainly in Chile (9.2 Mt), Australia (8.4 Mt), China (4.6 Mt), Argentina (4.4 Mt) and the United States (4.4 Mt). Brazil has the 7th largest mineral reserve, with about 844.5 thousand tonnes of lithium (contained) in proven and probable reserves.



Brazilian lithium reserves in 2025 correspond to the proven and probable reserves (in contained Li_2O) declared by companies in the Annual Mining Report (RAL), base year 2025, in accordance with the CRIRSCO international classification of resources and reserves and ANM Resolution 94/2022.

Distribution of the Main World Lithium Reserves - 2025 (%)



Sources: USGS - Mineral Commodity Summaries 2026 and ANM (Brazilian reserves).

3. Domestic Production

In 2025, spodumene concentrate production was 306,514 t, with an average grade of 5.50%, corresponding to 16,858 t of contained Li_2O, a decrease of 19.90% compared to 2024. There was also production of 334,321 t of spodumene fines with an average grade of 0.95%, or 3,176 t of contained Li_2O.

Year	2023	2024	2025
Total Processed Lithium Production (contained Li_2O, t)	15,193	25,979	20,034



The national producers were Companhia Brasileira de Lítio (CBL), with the Cachoeira underground mine, in the municipalities of Itinga/Araçuaí-MG; AMG Mineração S.A., with the Volta Grande Mine, in Nazareno-MG; and Sigma Mineração S.A., with the Grota do Cirilo-Xuxa Mine (open pit), in Itinga-MG, producing spodumene concentrates from pegmatites. At the end of the year, Sigma Mineração S.A.'s production was partially halted.

Source: ANM

4. Foreign Trade

In 2025, the lithium sector recorded a trade **deficit of USD FOB 450.12 million.**



Mineral Sector Exports

Total: USD FOB 192.2 million
Variation: -36.5%

Main destinations:

- China (93.0%)
- South Korea (3.3%)
- Australia (0.5%)

Mineral Sector Imports

Total: USD FOB 642.3 million
Variation: -2.4%

Main origins:

- China (78.6%)
- United States (6.9%)
- Vietnam (2.2%)

Source: Open Data/Ministry of Development, Industry, Trade and Services (MDIC) and COMEXMIN/ANM

- Data include the Mineral Extractive Industry (IEM) and the Mineral Transformation Industry (ITM)

***FOB** = The seller fulfills its obligations and responsibilities when the goods, cleared for export, are delivered, stowed on board the vessel at the port of shipment, both indicated by the buyer, on the date or within the agreed period.

Foreign trade: main products of the mineral extractive industry (IEM) in 2025

Main exported products

	NCM 25309010 - Spodumene
USD FOB	66,609,220
EXP Share (%)	100.0

Main imported products

	No imports recorded in the IEM in 2025
USD FOB	—
IMP Share (%)	—

Foreign trade: main products of the mineral transformation industry (ITM) in 2025

Main exported products

	NCM 28252010 - Lithium oxide	NCM 85076000 - Lithium-ion electric accumulators
USD FOB	115,735,912	8,043,151
EXP Share (%)	92.2	6.4

Main imported products

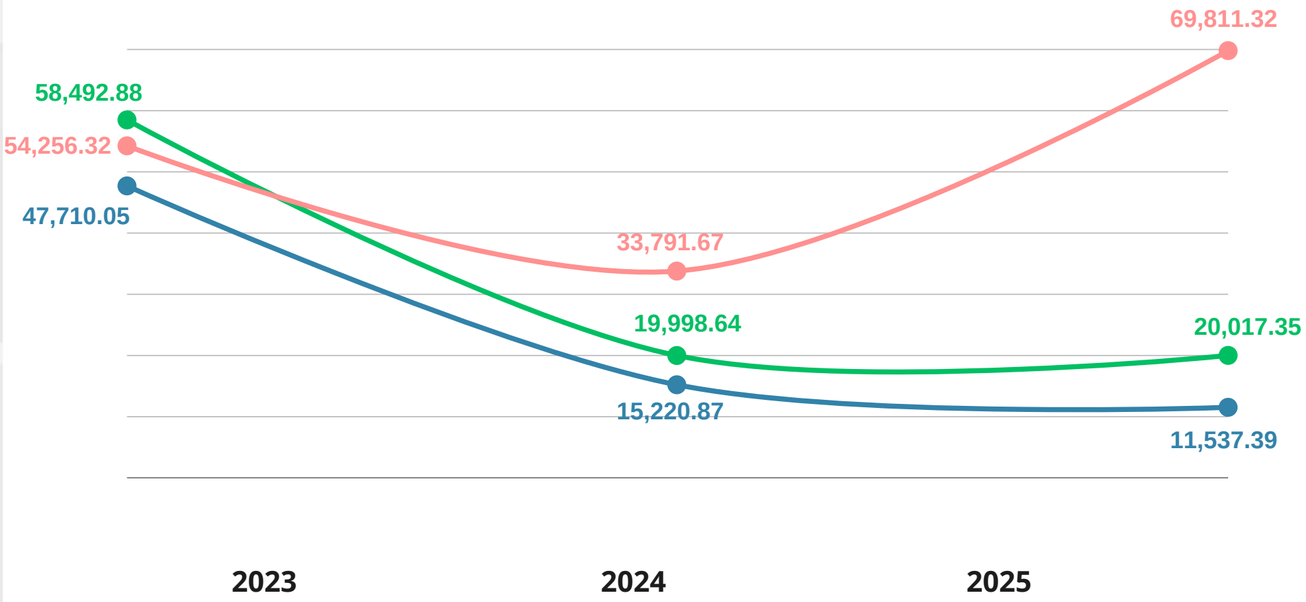
	NCM 85076000 - Lithium-ion electric accumulators	NCM 85065010 - Lithium cells and batteries, external volume not exceeding 300 cm^3
USD FOB	609,835,931	24,702,169
IMP Share (%)	94.9	3.8

Source: Open Data/Ministry of Development, Industry, Trade and Services (MDIC) and COMEXMIN/ANM

5. Prices

Prices reflect the dynamics of the international market and are influenced by factors such as global demand, production costs and economic fluctuations.

Chart – Average FOB prices - USD/t - Last 3 years



Lithium carbonates (imports)
NCM: 28369100

Lithium hydroxide (imports)
NCM: 28252020

Lithium chloride (imports)*
NCM: 28273960

*Note: small import volume (318 kg)

Source: Open Data/Ministry of Development, Industry, Trade and Services (MDIC).
***FOB** = The seller fulfills its obligations and responsibilities when the goods, cleared for export, are delivered, stowed on board the vessel at the port of shipment, both indicated by the buyer, on the date or within the agreed period.

6. Financial Compensation for the Exploitation of Mineral Resources (CFEM)

In 2025, collection of CFEM, Brazil's mining royalty, amounted to about R$ 7.7 million, associated with the processed production of spodumene concentrates in the municipalities of Itinga-MG and Nazareno-MG.

State	Total Amount Paid (R$)
MG	7,665,142.53
Grand Total	**7,665,142.53**

7. Investments and Mining Rights

Lithium investments are concentrated mainly in the mineral exploration stage.

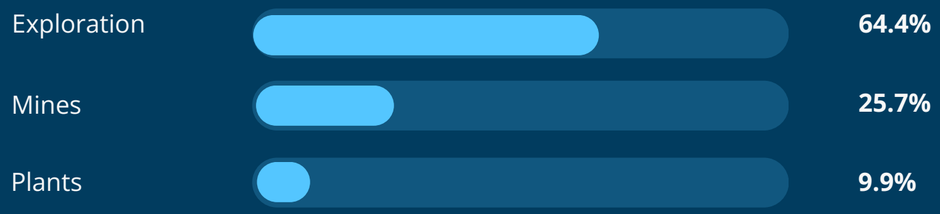
Investments in mining

In 2025, according to the Mineral Exploration Investment Declaration (DIPEM), declared investments for lithium were approximately R$ 72.9 million. Investments in the mining and processing stages totaled R$ 40.2 million. The main state for DIPEM, mining and processing investments in lithium was Minas Gerais, with R$ 81.6 million (72.2% of the total).

Main States

- MG (72.2%)
- RN (13.5%)
- PB (5.7%)

Investment Share



Mining Rights 2025

Main States

- CE (71 permits)
- BA (69 permits)
- MG (69 permits)

Mineral Exploration

- 330 new exploration permits
- -70% compared with 2024
- 1 Exploration Report approved

Mining Application

- 2 mining applications

Mining Concession/ PLG

- 2 mining concessions published
- 1 PLG granted

8. Relevant Factors

In 2025, Brazil consolidated its position among the world's main frontiers for lithium mining from high-purity spodumene in pegmatite deposits. The main expansion hub is in the Jequitinhonha Valley, in Minas Gerais ("Lithium Valley"). The quality of the deposits and low operating costs are important competitive advantages for the country.

Among the units in production, AMG reported that the Volta Grande Mine, in Nazareno (MG), reached its nameplate capacity of 130 thousand t/year and advanced engineering studies for the implementation of a lithium chemical conversion unit [1–4]. Sigma Lithium's Grota do Cirilo Complex stood out for the technical upgrade of the unit and progress in expanding its production capacity [5–7].

Among the projects under implementation and in advanced engineering, Atlas Lithium's Neves Project is awaiting the assembly of its dense media separation (DMS) plant, following the arrival of the modules. The Phase 1 DFS confirmed low operating costs (OPEX) and a fast payback, with 100% dry-stacked tailings. Estimated production is 146 thousand t/year of lithium concentrate. In 2024, the project established a strategic partnership with Mitsui, with an investment of US$ 30 million and an offtake prepayment for part of the future Phase 1 spodumene concentrate production [8–12]. At Lithium Ionic's Bandeira Project, Measured and Indicated resources were updated to 27.27 Mt of pegmatite ore, in accordance with NI 43-101. The FS estimates 177 thousand t/year of spodumene concentrate grading 5.2% Li_2O. In September 2025, the Feasibility Study advanced, with start of operations expected between 2027 and 2028 [13–18]. Pilbara Minerals (PLS) completed the US$ 370 million acquisition of Latin Resources and took control of the Colina Project, in the Jequitinhonha Valley (MG). The project envisages a large-scale mine with an indicated average production of 405 thousand t/year of spodumene concentrate grading 5.5% Li_2O; start of operations had been expected for 2026/2027 [19–22].

8. Relevant Factors (cont.)

Exploration and frontier projects are represented by Solis Minerals, which continued a surface sampling program at the Borborema Project (RN) [23]. Spark Energy Minerals, at the Arapaima Project (Araçuaí-MG), continued soil surveys, with indications of correlation with lithium-bearing pegmatite deposits and definition of drilling targets [24–26]. Oceana Lithium (formerly Oceana Metal), at the Solonópole Project (CE), identified spodumene-mineralized bodies and defined new targets for future drilling campaigns in a mineralized pegmatite corridor [27, 28]. Perpetual Resources began exploratory drilling at the Igrejinha Project. The Isabella and Renaldinho projects remain in the surface geological sampling phase [29]. Montes Verdes Participações signed a cooperation agreement with Gulf Resources to create a joint venture focused on lithium and rare earths, with a revenue target of US$ 180 million by 2027 [30, 31].

Among institutional and sector actions, the Government of Minas Gerais consolidated a state decree to streamline customs and tax procedures for the import of machinery used in the processing of critical minerals. The Geological Survey of Brazil (SGB) continued its lithium studies in the states of Rio Grande do Norte and Ceará and published integrated geochemical data for northern Minas Gerais [32–35].

8. Relevant Factors – Sources

Sources of the information cited on pages 11 and 12, in the order of the bracketed references (click an item to open the link).

[1] Agência Minas (2024) – AMG raises Nazareno capacity to 130 thousand t/year

[2] Metalnomist (May/2025) – Mibra expansion to 130 thousand t/year completed

[3] Diário do Comércio – AMG lithium carbonate plant under study

[4] Argus Media (01/29/2026) – AMG considers lithium processing in Brazil

[5] SEC/EDGAR (03/31/2025) – NI 43-101 Technical Report, Grota do Cirilo

[6] Sigma Lithium – 2Q25 results (Phase 2 progress)

[7] O Tempo (10/22/2025) – Sigma postpones vertical integration plans

[8] Newsfile/Atlas Lithium (03/10/2025) – modular DMS plant arrives in Brazil

[9] Newsfile/Atlas Lithium (08/04/2025) – Neves Project DFS

[10] Newsfile/Atlas Lithium (01/21/2025) – DMS plant with dry-stacked tailings

[11] Times Brasil/CNBC (06/29/2026) – Neves expansion license

[12] Newsfile/Atlas Lithium (03/28/2024) – Mitsui investment and offtake

[13] Mining.com (05/06/2025) – Bandeira resource update

[14] Nasdaq/GlobeNewswire (06/09/2025) – Bandeira NI 43-101

[15] Mining Reporters (09/22/2025) – Bandeira Feasibility Study

[16] GlobeNewswire/Lithium Ionic (06/11/2026) – Bandeira engineering

[17] Brasil Mineral (Jun/2026) – Bandeira equipment orders

[18] Estadão/Minera Brasil (Jul/2026) – Bandeira license and start-up

[19] PLS (02/04/2025) – acquisition of Latin Resources completed

[20] MarketScreener – PLS ASX announcement on the acquisition

[21] Proactive Investors – Colina Project PEA (Latin Resources)

[22] Australian Mining Review – PLS and the Colina investment decision

[23] Solis Minerals – announcement of 01/30/2026 (Borborema Project)

[24] Newsfile/Spark (03/21/2025) – stream sediment sampling

[25] Newsfile/Spark (06/02/2025) – Arapaima NI 43-101 Technical Report

[26] Newsfile/Spark (07/18/2025) – priority drilling targets

[27] ASX/Oceana (03/13/2025) – half-year report (Solonópole)

[28] Oceana Metals – quarterly report (Dec/2025)

[29] ASX/Perpetual (04/30/2025) – new pegmatite trend at Isabella Project

[30] SEC – Gulf Resources Form 8-K (08/26/2026)

[31] CNN Brasil (08/26/2026) – Chinese company enters lithium and rare earths

[32] Cenário Energia (12/19/2025) – SGB assesses RN and PB pegmatites

[33] RIGEO/SGB (2025) – pegmatite potential map, Parelhas Hub

[34] Agência Gov (Sep/2026) – SGB releases lithium data for Solonópole (CE)

[35] Cenário Energia (07/15/2025) – SGB presents new geochemical data