Tungsten (W)

Base Year 2025

World Production

85 kt of contained tungsten

+3.7%

Brazil Production

277 t of contained tungsten

-2.1%

National Highlight

Rio Grande do Norte (100% of national production)

Mineral Sector Trade Balance

Deficit of USD 36.59 million

Mineral Sector Exports

USD FOB 18.03 million

+38.9%

Mining Royalties (CFEM)

R$ 748.12 thousand

+27.5%

% Change 2025 vs 2024

What is Tungsten?

Tungsten (W), also known as wolfram, is a metallic chemical element with atomic number 74. It is a high-density refractory metal (19.3 g/cm³) and has the highest melting point of all metals (3,414 °C). Its main mineral sources are scheelite ($CaWO_4$) and wolframite [$(Fe,Mn)WO_4$].

Where does it occur?

Worldwide, production is highly concentrated in China, although occurrences and mines also exist in countries such as Vietnam, Russia, Austria, Portugal, Spain, Canada and Bolivia.

In Brazil, scheelite is concentrated in the Seridó Scheelite Province (RN and PB), in skarn-type deposits. Wolframite occurs mainly in quartz veins and secondary deposits, often associated with cassiterite, with records in the Amazon, Center-West, Southeast and South of the country.

Main Applications

The main application of tungsten is the manufacture of hard metal (cemented tungsten carbide), used in cutting and drilling tools and in wear-resistant components. Tungsten is also used in tool steels, superalloys and high-density alloys, as well as in electrodes, electrical contacts, heating elements, catalysts and lubricants, with applications in the mining, oil and gas, construction, automotive, aerospace and defense industries.

Although it occurs on several continents, world tungsten production remains highly concentrated: in 2025, China accounted for about 79% of the total produced.

1. World Supply

This section presents global tungsten production data, showing Brazil's share in the international scenario.

In 2025, world tungsten production was approximately 85 kt of contained tungsten, an increase of 3.7% compared to 2024. China accounted for about 79% of world production, maintaining a wide lead in the market.



Brazil produced 277 t of contained tungsten in 2025, equivalent to 0.3% of the world total.

Table 1 – Main tungsten-producing countries (contained in concentrate) – 2025

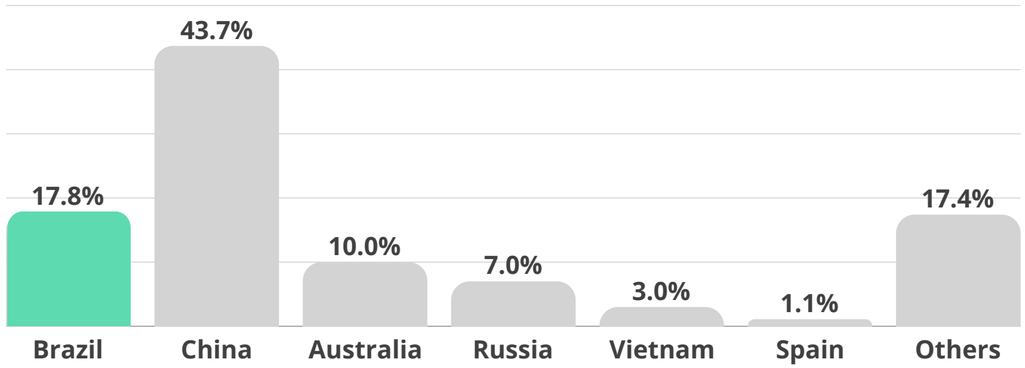
Country	Production (t)	Share (%)
Brazil	**277**	**0.3**
China	67,000	78.8
Vietnam	3,000	3.5
Kazakhstan	2,400	2.8
North Korea	2,000	2.4
Russia	2,000	2.4
Other Countries	8,323	9.8
Total	**85,000**	**100.0**

Sources: ANM; USGS - Mineral Commodity Summaries 2026.

2. Reserves

According to the United States Geological Survey (USGS), world tungsten reserves in 2025 exceed 4.7 Mt of contained tungsten. Although Brazil is not among the countries individually highlighted by the USGS, ANM records Brazilian reserves of 1.02 Mt of contained tungsten, according to data from the Annual Mining Report (RAL). Given the relevance of this figure, Brazilian reserves were included in the chart as a complement to the USGS data, in order to highlight Brazil's share in the global scenario.

Main World Tungsten Reserves – 2025





Proven tungsten reserves in **Brazil**, in 2025, totaled 20.3 Mt, and probable reserves 8.5 Mt, reaching 28.8 Mt of tungsten ore.

Sources: ANM; USGS - Mineral Commodity Summaries 2026 (Brazilian reserves: ANM/RAL).

3. Domestic Production

In 2025, Brazilian production of beneficiated tungsten concentrate was 367.64 t, practically stable compared to 2024 (367.88 t). Of this total, 277 t of contained tungsten were determined.

Domestic production remained entirely concentrated in Rio Grande do Norte, the country's main tungsten-producing hub, located in the Seridó Scheelite Province.

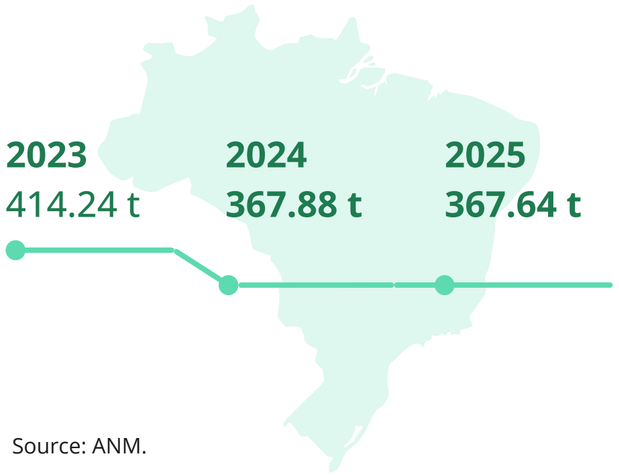


The state of **Rio Grande do Norte** persists as the main production hub, with:

- 368 t of concentrate produced
- 277 t of contained W produced
- 100% of national production

Brazilian Production of Beneficiated Tungsten Concentrate (t)

Last 3 years



Source: ANM.

4. Foreign Trade

In 2025, in Brazil's foreign trade in tungsten-related products, imports were led by the Mineral Transformation Industry (ITM), which accounted for practically 100% of the value imported; in exports, the ITM accounted for 71.2% and the Mineral Extractive Industry (IEM) for 28.8%. The sector recorded a **deficit of USD 36.6 million.**



Mineral Sector Exports

Total: USD FOB 18.0 million
Growth: +38.9%

Main destinations:

- Netherlands (32.7%)
- Germany (20.7%)
- United States (10.0%)

Mineral Sector Imports

Total: USD FOB 54.6 million
Decrease: -13.9%

Main origins:

- China (50.6%)
- Germany (11.5%)
- United States (9.0%)

Source: Open Data/Ministry of Development, Industry, Trade and Services (MDIC). 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 26110000 - Tungsten (wolfram) ores and concentrates
USD FOB	5,190,757
EXP Share (%)	100.0

Main Imported Products

	NCM 26110000 - Tungsten (wolfram) ores and concentrates
USD FOB	1,873
IMP Share (%)	100.0

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

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

Main Exported Products

	NCM 81019700 - Tungsten waste and scrap	NCM 72028000 - Ferro-tungsten and ferro-silico-tungsten
USD FOB	8,216,700	1,439,878
EXP Share (%)	64.0	11.2

Main Imported Products

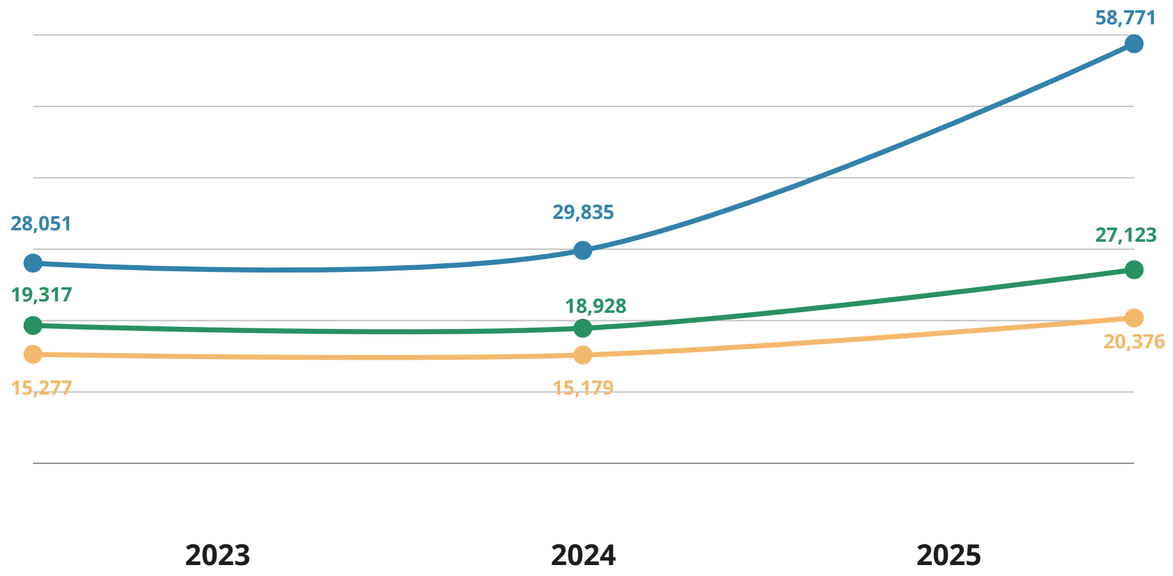
	NCM 85392110 - Tungsten halogen lamps and tubes, voltage ≤ 15 V	NCM 85392190 - Other tungsten halogen incandescent lamps and tubes
USD FOB	25,073,975	8,350,388
IMP Share (%)	45.9	15.3

In the mineral transformation industry associated with tungsten, 2025 imports were led by halogen lamps, which together accounted for 61.2% of the value imported. This result stems from the scope of the relationship matrix used by COMEXMIN, which includes downstream manufactured products.

5. Prices

In 2025, the average unit values of exports of ferro-tungsten and ferro-silico-tungsten, of tungsten waste and scrap, and of ores and concentrates increased compared to 2024. The largest increase was recorded for ferro-tungsten and ferro-silico-tungsten.

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



NCM 26110000 - Tungsten (wolfram) ores and concentrates (exports)

NCM 81019700 - Tungsten waste and scrap (exports)

NCM 72028000 - Ferro-tungsten (ferro-wolfram) and ferro-silico-tungsten (ferro-silico-wolfram) (exports)

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)

Collections of CFEM, Brazil's mining royalty, reflect the economic contribution of mining to the country, showing the distribution of revenues among producing states and the share of the main companies in the sector.

CFEM - Tungsten (2025)

- Total collected: R$ 748.12 thousand
- Change: +27.5% compared with 2024 (R$ 586.7 thousand)

Main States by Collection

Rio Grande do Norte (91.5%)

Rondônia (8.5%)

Main Companies by Collection



Collections grew 27.5% compared with 2024, despite the stability of domestic concentrate production.

Rio Grande do Norte accounts for 91.5% of collections, reflecting the concentration of domestic production in the Seridó Scheelite Province.

Source: ANM.

7. Investments and Mining Rights

Investments in tungsten mining are concentrated in Rio Grande do Norte, which accounts for 99.09% of the total invested in Brazil in 2025.

Investments in Mining

In 2025, according to data from the Mineral Exploration Investment Statement (DIPEM) and the Annual Mining Report (RAL), investments in tungsten mining totaled R$ 6.4 million.

Main States

- RN (99.09%)
- PB (0.91%)

Investment Breakdown



Mining Rights Granted in 2025

Mineral Exploration

- 20 new exploration permits
- -28.6% compared with 2024
- 18 final exploration reports approved

Main States

- RN (06 permits)
- BA (04 permits)
- CE (04 permits)

Mining Applications

- 3 mining applications

Mining Concessions/PLG

- 3 PLGs granted

Source: ANM.

8. Relevant Factors

Tungsten remained highly relevant in 2025 because of its industrial and defense applications. Its high hardness, wear resistance and high melting point favor its use in cutting and drilling tools, mining, electronics, aerospace and military applications, including ammunition. The vulnerability of the chain is heightened by the concentration of world production in China, which accounts for about 80% of mineral supply.

In February 2025, China established export controls on tungsten-related products, including ammonium paratungstate, oxides and carbides, which became subject to licensing. The measure covered dual-use (civil and military) materials, reinforcing international concerns about dependence on China and the security of critical mineral supply chains.

In response to the vulnerability of the chain, diversification initiatives moved forward. The US Department of Defense allocated US$ 6.2 million to the Pilot Mountain project in Nevada, treating the development of a domestic tungsten source as a priority. Sandvik highlighted its strategy based on the Mittersill mine in Austria, recycling and supplier diversification, while the Sangdong mine in South Korea began mining at the end of 2025.

In Canada, the Sisson tungsten and molybdenum project received US$ 15 million from the US Department of Defense to advance its development. The funding intensified opposition from leaders and elders of the Wolastoqey indigenous lands, who linked their concerns about impacts on traditional lands and waters also to the strategic and military use of the mineral. The episode highlights tensions between supply security, defense and the socio-environmental governance of mining.

Brazilian production remains concentrated in the Seridó Scheelite Province, in Rio Grande do Norte, and is small in scale compared with the main world producers. However, the Chinese restrictions and the intensified international search for alternative sources in 2025 reinforced the strategic importance of Brazilian occurrences and their potential in a scenario of diversification of global tungsten supply chains.