Platinum Group Metals

(Pt, Pd, Ir, Os, Rh, Ru)

Base Year 2025

World Production

190 tonnes of palladium and 170 tonnes of platinum

Pd -12.4% | Pt -0.5%

Brazil Production

No production of platinum group metals

0.0%

National Highlight

No production of platinum group metals

Trade Balance

↓ Deficit of USD FOB 598.45 million

Exports

USD FOB 200.22 million

+77.7%

Mining Royalties (CFEM)

R$ 0.00

0.0%



What are PGMs?

The platinum group metals (PGMs) comprise six metallic elements:

- Ruthenium (Ru) — atomic no. 44
- Rhodium (Rh) — atomic no. 45
- Palladium (Pd) — atomic no. 46
- Osmium (Os) — atomic no. 76
- Iridium (Ir) — atomic no. 77
- Platinum (Pt) — atomic no. 78

Occurrence

PGMs occur predominantly in magmatic deposits associated with mafic and ultramafic intrusions, where they are concentrated in sulfides rich in nickel, copper and iron.

Mineralogically, they occur both as minerals of their own — such as sperrylite, cooperite and braggite — and associated with nickel and copper sulfides, being recovered as co-products or by-products of the mining of these metals.

Main Applications

PGMs are used mainly in industrial and technological applications, due to their catalytic properties, corrosion resistance and chemical stability. They are used in:

- automotive catalysts;
- the chemical industry;
- hydrogen technologies;
- electronics;
- medical equipment;
- jewelry; and
- aerospace systems.

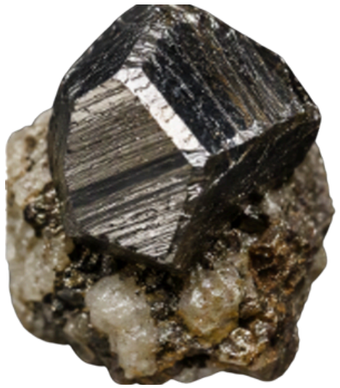
They play an essential role in the energy transition and in high-technology sectors.

PGMs, especially platinum and palladium, can serve as financial assets and stores of value, owing to their rarity, high liquidity and strategic importance for industry. These metals are also used for investment diversification and wealth protection in scenarios of economic instability or supply constraints.

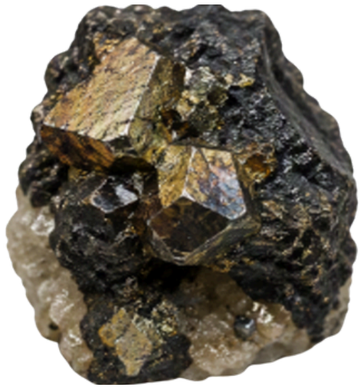
1. World Supply

In 2025, according to the United States Geological Survey (USGS), world platinum production reached 170 tonnes, a decrease of about 0.5% compared with the previous year.

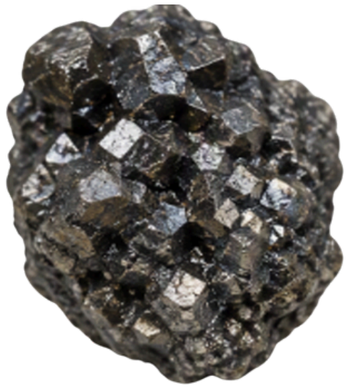
Global palladium production reached 190 tonnes, a decline of about 12.4% compared with 2024.



Sperrylite
$PtAs_2$



Cooperite
PtS



Braggite
(Pt,Pd,Ni)S

Table – Main platinum and palladium producing countries (contained metal) – 2025

Country	Palladium (kg)	Platinum (kg)
United States	6,200	1,800
Canada	16,000	5,000
Russia	84,000	20,000
South Africa	70,000	120,000
Zimbabwe	15,000	18,000
Other countries	2,900	3,900
Total	**190,000**	**170,000**

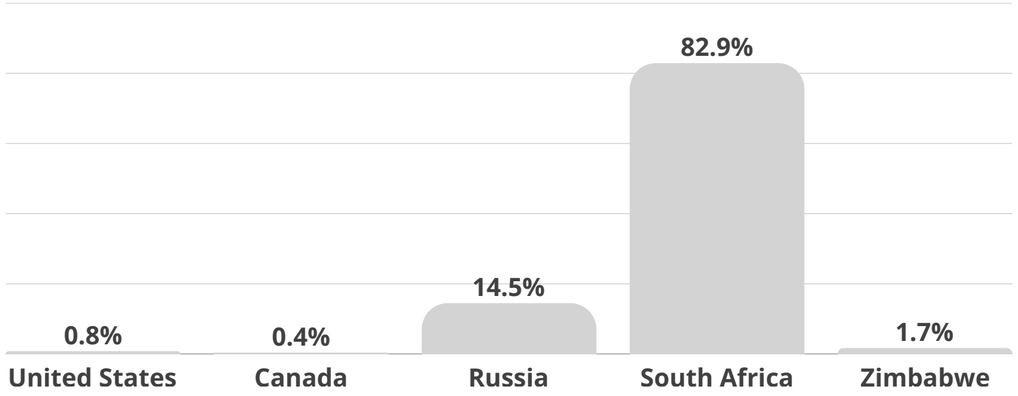
Sources: ANM; USGS – Mineral Commodity Summaries 2026.

2. Reserves

According to the USGS, in 2025 world platinum group metal reserves totaled approximately 76 thousand tonnes.

The main world deposits are related to large layered complexes, such as the Bushveld Complex in South Africa and the Norilsk-Talnakh Complex in Russia.

Distribution of the main world platinum group metal reserves – 2025





Brazil has official reserves of only 13.8 tonnes of contained PGMs in 2025 — 8,210 kg of palladium (5,860 kg proven and 2,350 kg probable) and 5,580 kg of platinum (3,970 kg proven and 1,610 kg probable).

Source: USGS – Mineral Commodity Summaries 2026 (PGMs).

3. Domestic Production

There was no domestic production of PGM ore or concentrate in 2025.

Over the last three years, production behaved as shown in the table below:

Year	2023	2024	2025
PGMs (contained, t)	0	0	0



The absence of domestic production stems from the still exploratory stage of Brazilian PGM projects, concentrated in Ceará, Pará and Bahia, all in the mineral exploration or economic feasibility study phase.

Source: ANM

4. Foreign Trade

In 2025, the platinum group metals trade balance recorded a deficit of USD FOB 598.45 million.



Mineral Sector Exports IEM + ITM

Total: USD FOB 200.22 million
Variation: +77.7%

Main destinations:
- Germany (65.9%)
- Belgium (25.5%)
- Japan (5.9%)

Mineral Sector Imports IEM + ITM

Total: USD FOB 798.67 million
Variation: +54.1%

Main origins:
- South Africa (54.4%)
- Belgium (34.0%)
- United States (5.0%)

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)

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

Main Exported Products

	There are no records of IEM exports of platinum group metals
USD FOB	-
EXP Share (%)	-

Main Imported Products

	There are no records of IEM imports of platinum group metals
USD FOB	-
IMP Share (%)	-

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

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

Main Exported Products

	NCM 71129200 - Other waste and scrap of platinum, including metal clad with platinum	NCM 71151000 - Platinum catalysts in the form of wire cloth or grill
USD FOB	132,038,961	60,029,898
EXP Share (%)	65.9	30.0

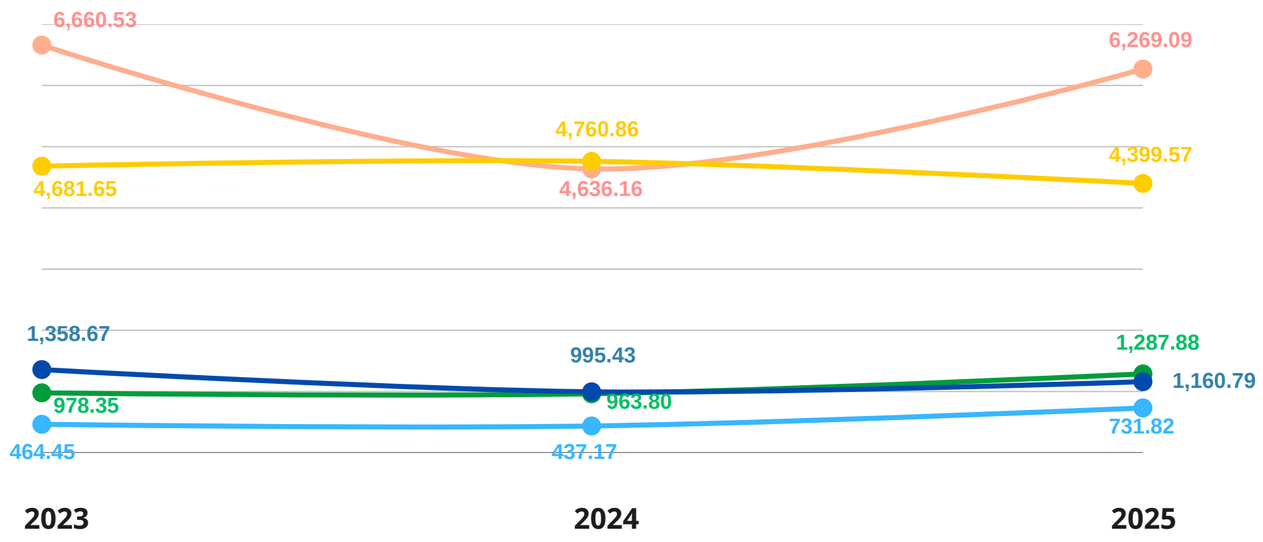
Main Imported Products

	NCM 71102100 - Palladium, unwrought or in powder form	NCM 71103100 - Rhodium, unwrought or in powder form
USD FOB	397,749,935	213,688,074
IMP Share (%)	49.8	26.8

5. Prices

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

Chart – Average prices USD/troy oz - Last 3 years



Platinum
USD/troy oz

Palladium
USD/troy oz

Rhodium
USD/troy oz

Iridium
USD/troy oz

Ruthenium
USD/troy oz

Source: Johnson Matthey Precious Metals Marketing – https://matthey.com/products-and-markets/pgms-and-circularity/pgm-management

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

In 2025, there was no production of platinum group metals; therefore, no CFEM (Brazil's mining royalty) was collected.

7. Investments and Mining Rights

Platinum group metal investments are concentrated in the mineral exploration stage.

Investments in Mining

In 2025, according to the Mineral Exploration Investment Statement (DIPEM), investments in mineral exploration for platinum, palladium and iridium amounted to R$ 3.44 million, an increase of 34.4% over the previous year.

Main States

- RR (55.2%)
- CE (44.5%)
- GO (0.3%)

Investment Breakdown

Exploration	**100.0%**
Mines	**0.0%**
Plants	**0.0%**

Mining Rights 2025

Main States

- PE (5 permits)
- PR (4 permits)
- MT (2 permits)

Mineral Exploration

- 15 exploration permits published
- -11.8% compared to 2024
- Palladium, platinum and osmium
- 6 approved final exploration reports published

Mining Application

- 1 mining application filed (MG)

Mining Concession/ PLG

- No mining concessions were granted

8. Relevant Factors

Pedra Branca Project: located in the municipality of the same name in central Ceará, it is run by the Canadian junior mining company ValOre Metals Corp (TSX-V: VO; OTCQB: KVLQF; FSE: KEQ0). The project covers an extensive mafic-ultramafic complex favorable to the occurrence of platinum group elements and gold. The company has increased its investment in mineral exploration and metallurgical studies in order to confirm the economic feasibility of the deposit. (Source: ValOre Metals Corp – Building a Brazilian Precious Metals Powerhouse corporate)

Luanga Project: located in Curionópolis, in the Carajás Mineral Province (PA), the Luanga Project is being developed by the junior mining company Bravo Mining (TSXV: BRVO). The project comprises a polymetallic PGM-Ni-Cu-Au deposit at an advanced stage of development. The company is assessing the construction of a smelter in Barcarena (PA), aiming at the vertical integration of production and adding value in the country. (Source: Bravo Mining – Luanga Critical Minerals for Clean Air)

By-products of the vanadium operation: the Canadian multinational Largo Inc. (Nasdaq: LGO; TSX: LGO) is known for vanadium production at the Maracás Menchen complex in Bahia. Recent studies have identified potential for recovering platinum, palladium, gold, copper, silver, cobalt and nickel associated with the vanadium ore. Industrial-scale tests have demonstrated the feasibility of producing concentrates containing platinum group elements and other strategic metals. The strategy is based on recovering these metals as by-products of the vanadium operation, increasing the profitability and efficiency of the deposit's mineral use. (Source: Largo Inc. – Supplying critical materials for the future)