

Fact Sheet - Antimony (Sb)

Background note to support New Zealand permit application

- **Critical mineral in New Zealand (2025)**
- **Occurs in association with gold-bearing systems in Reefton**
- **Used across fire safety, batteries and semiconductors**

Antimony is a critical mineral used in fire safety products, batteries, semiconductors, specialty alloys, glass and selected medical and defence applications. It is most commonly recovered from the mineral stibnite (Sb₂S₃). Interest in antimony has strengthened because global supply is concentrated and several jurisdictions now classify it as a critical raw material. In January 2025, New Zealand included antimony on its first Critical Minerals List.



Key facts

Item	Summary
Chemical symbol	Sb
Principal ore mineral	Stibnite (Sb ₂ S ₃)
New Zealand status	Included on New Zealand’s Critical Minerals List in 2025.
Main New Zealand association	Orogenic gold-bearing quartz veins in greywacke in Westland (Reefton), and in schist in Marlborough and Otago.
Historic New Zealand production	About 3,900 tonnes of antimony ore have historically been produced from quartz veins at Rangitarore Hill in Northland and Endeavour Inlet in Marlborough.
Selected global snapshot (2024)	Estimated world mine production was about 100,000 tonnes of contained antimony, with China the largest producer at about 60,000 tonnes.
World reserves	USGS reports world reserves of more than 2 million tonnes of antimony.

Antimony in New Zealand

In New Zealand, the antimony mineral stibnite occurs principally in association with orogenic gold-bearing quartz veins in greywacke in Westland (Reefton) and in schist in Marlborough and Otago. Additional occurrences are known from Northland, the Coromandel Peninsula and the Taupo Volcanic Zone.

Official New Zealand sources note that around 3,900 tonnes of antimony ore have historically been produced from Rangitarore Hill in Northland and Endeavour Inlet in Marlborough. Resources at Endeavour Inlet have been reported at 25,000 tonnes grading 15% Sb (3,750 tonnes contained antimony). Those same sources also identify potential for antimony production from quartz-vein deposits in the Reefton Goldfield, including as a by-product of gold mining.

Why this matters for New Zealand

Antimony is now formally recognised as a critical mineral in New Zealand. That places local antimony occurrences - particularly where they are associated with established gold systems - within a broader context of supply security, technology demand and potential downstream economic value.

Global supply and strategic context

USGS estimates 2024 world mine production at approximately 100,000 tonnes of antimony, with China accounting for about 60,000 tonnes, followed by Tajikistan (17,000 tonnes), Russia (13,000 tonnes), Bolivia (3,700 tonnes) and Australia (2,000 tonnes). This concentration of supply has heightened concern in western markets about secure access to antimony units.

USGS also reported that China announced export licensing requirements for antimony ore, metal, oxides and related products in August 2024, and then banned antimony exports to the United States in December 2024. Following the August announcement, the quoted antimony metal price cited by USGS rose from US\$8.91/lb in July 2024 to US\$17.50/lb in November 2024.

Country	2024 mine production (t Sb)	Reserve position / note
China	60,000	Largest producer; reported reserves 670,000 t Sb.
Tajikistan	17,000	Reported reserves 50,000 t Sb.
Russia	13,000	Reported reserves 350,000 t Sb.
Bolivia	3,700	Reported reserves 310,000 t Sb.
Australia	2,000	Reported reserves 140,000 t Sb (USGS note: JORC-compliant/equivalent reserves 20,000 t).
World total	100,000	USGS reports world reserves of >2,000,000 t Sb.

Table note: World production and reserve figures above are selective extracts from USGS Mineral Commodity Summaries 2025.

Key uses of antimony

Flame retardants and fire safety: Antimony trioxide is a major use of antimony and is widely added to plastics, textiles, rubber, paper, adhesives and other materials to improve fire performance. This remains one of the most important end-use markets globally.

Batteries and energy storage: Metallic antimony is used as a hardening agent for lead, particularly in lead-acid batteries. Geoscience Australia notes that battery applications account for around one third of global antimony use.

Alloys and metallurgy: Antimony improves hardness, strength and wear resistance in lead and tin alloys. Common uses include solder, bearings, castings, sheet and pipe metal, pewter and other specialty metallurgical products.

Electronics and semiconductors: Antimony is used in semiconductors and electronic components, including micro-capacitors and selected specialist sensor technologies. These applications help explain why antimony appears on multiple national critical-minerals lists.

Glass, ceramics and industrial chemicals: Antimony compounds are used in glass as a refining or de-gassing agent and in ceramics, enamels, pigments and other chemical products where improved optical or processing properties are required.

Medical applications: New Zealand’s Critical Minerals List identifies medical use as one of the key end-use categories for antimony. Certain antimony compounds have also had pharmaceutical use in specific disease treatments.

Defence and security applications: Defence-related uses are strategically important but are best considered after the broader civilian applications above. Antimony contributes to ammunition and other specialist military technologies, and its importance to defence supply chains is one reason it is treated internationally as a critical mineral.

Summary

Antimony is a genuine strategic mineral with established industrial uses, recognised supply risk and direct relevance to New Zealand. The New Zealand Government now classifies antimony as a critical mineral, and official geological sources identify Reefton as one of the country’s meaningful antimony-bearing districts. In that context, antimony should be viewed not as a niche curiosity, but as a mineral of practical economic and strategic importance.

Selected official sources

Source	Relevance
MBIE - A Critical Minerals List for New Zealand (2025)	Confirms antimony is on New Zealand’s Critical Minerals List and identifies defence, EV and medical uses.
Earth Sciences New Zealand / GNS - Antimony	Summarises the occurrence of stibnite in New Zealand, including Reefton.
NZPAM - The Mineral Potential of New Zealand, Part 1	Provides historical production and resource context for New Zealand antimony occurrences.
USGS - Mineral Commodity Summaries 2025: Antimony	Provides current global production, reserve and market context.
Geoscience Australia / DCCEE antimony references	Provides concise official descriptions of industrial uses including batteries, alloys, flame retardants, semiconductors, glass and chemicals.