S&P Global
Energy

# Antimony Market Report

## Antimony (Sb)

August 2026

# Preamble

This draft **Antimony Market Report** aims to increase transparency within the antimony supply chain, helping public and private stakeholders make more informed investment decisions across the commodity lifecycle. It briefly outlines current supply chain bottlenecks, resiliency issues, and the market signals needed to support a more robust and diverse supply base.

S&P Global conducted a bottom-up, asset-level analysis of production costs across the antimony value chain, covering both antimony concentrate production (mining) and antimony smelting. For this first market report, the analysis focuses on these two key stages of the supply chain, which underpin the availability of antimony units and refined products. These production cost curves provide an independent view of supply economics and identify the marginal supplier in a structurally tight market. The analysis excludes assets located in Russia, China, and North Korea, as well as any assets worldwide that are majority-owned by Chinese companies.

This analysis reflects a multi-year effort combining bottom-up asset modelling, proprietary market intelligence, extensive research, expert assumptions, and industry consultation to overcome significant data limitations across the opaque mineral value chain.

The market values in this report represent a fundamentals-based assessment of the cost and the break-even range required for antimony production sources to remain economically viable and meet sufficient G7+Australia demand. This enhanced cost transparency can facilitate better-informed offtake agreements and investments throughout the supply chain. However, actual transactions also factor in inventory levels, broader market conditions, global trade dynamics, and other variables not included in this analysis.

These values are different to the spot market price assessments published by Platts, part of S&P Global Energy (link).

Given the limited availability of public data, this report is based on S&P Global's proprietary market and mineral intelligence and our analysis of company disclosures, and market information. We welcome input from market participants to support the ongoing refinement of future editions.

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## Key Takeaways

- S&P Global estimates a structural cost of $11-13/kg Sb in 2028 is needed to sustain the current pipeline of three projects. These projects alone are not enough to break single-source dependency for future demand, highlighting the need for deeper supply chain development.
- Antimony demand is expected to increase by ~3% between 2026 and 2030. Declining lead-acid battery demand is projected to reduce antimony consumption in this segment by ~9%; however, continued growth in solar glass, flame retardants, and defense applications is expected to more than offset these losses.
- If completed, the three announced ex-China smelting projects would increase capacity to 68 kt (thousand metric tons) by 2030, leaving a ~27% gap relative to projected ex-China demand.

# Introduction

Antimony (Sb) is a strategic metalloid used to improve fire resistance, strengthen lead and tin alloys, and control conductivity in specialized semiconductors. Antimony trioxide (ATO) makes flame-retardant materials more effective in plastics, electronics and military textiles, while in its metallic form, improves the hardness and strength of alloys used in batteries, ammunition, bearings and solders.

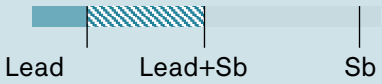
Antimony is produced from primary antimony deposits and as a by-product of gold, silver, and base metal mining. The principal antimony mineral is stibnite ($Sb_2S_3$), which is processed into a range of intermediate and refined products including concentrates, metal, antimony trioxide, and specialty compounds. The Sb supply chain is highly concentrated, with Chinese and Russian-controlled operations dominating mining, smelting and production of other intermediates, such as oxides. While Tajikistan, Türkiye, and Thailand serves as additional key producers, the market remains highly exposed to trade restrictions and Chinese policy decisions.

In August 2024, China introduced antimony export controls, and subsequently banned exports to the US in 2024, which tripled the antimony CIF price (NW Europe) from ~$23/kg to $63/kg between Aug 2024, and mid 2025. Following the temporary lifting of the export ban in November 2025, prices fell to ~$27/kg through 2026. These supply concerns have accelerated efforts to diversify antimony supply chains outside China, supporting projects such as Thompson Falls smelter expansion, and the Stibnite Gold-Antimony Project.

### Antimony's Properties

**Hardness:**

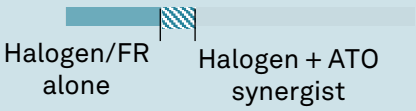
30 – 58 Brinell Hardness test




When lead is mixed with ~6% of Sb, it increases the alloy hardness by 3-4x.

**Fire resistance enhancement:**

Limiting Oxygen index (LOI)




For a Polypropylene, when halogenated fire retardants use ATO as synergist, it increases the LOI by ~30%.

Sources: S&P Global; Project Blue data is used to estimate the primary mine supply breakdown; USGS; Antimony 99.65% CIF NWE Prices provided by LSEG

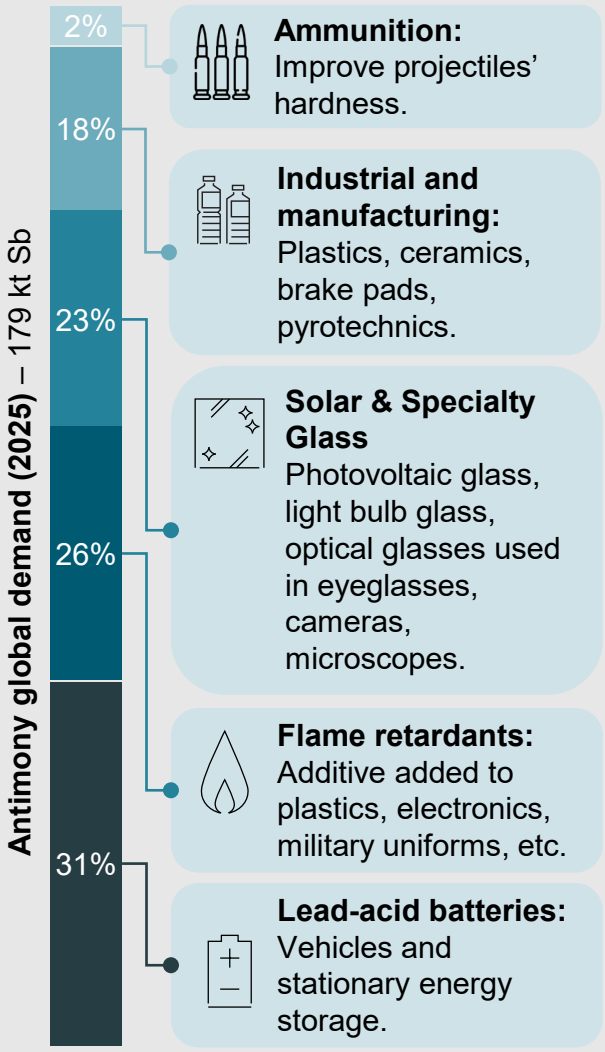
# Antimony demand

Antimony is used primarily in lead-acid batteries (31% of demand), where it improves hardness, mechanical strength, and corrosion resistance. Flame retardants account for 26% of consumption, primarily through the use of antimony trioxide in plastics, electronics, and construction materials. Solar glass represents approximately 23% of demand, driven by antimony compounds used to improve glass quality and clarity. Smaller end uses include ammunition, catalysts, and specialty glass.

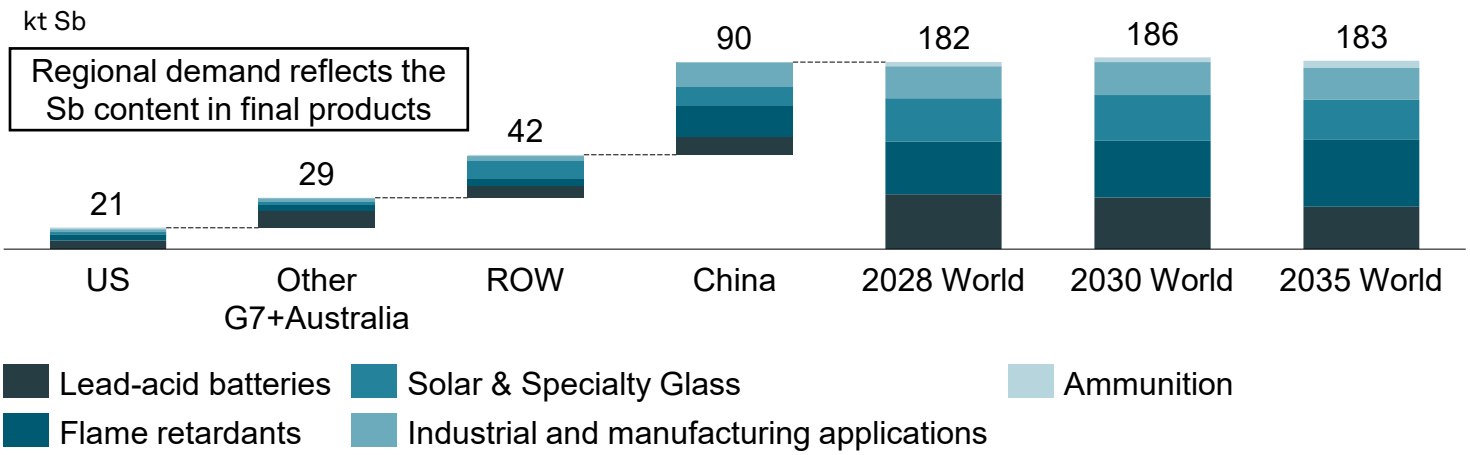
Global antimony demand is projected to grow slightly from ~179 kt Sb in 2025 to ~183 kt Sb by 2035. However, the market is undergoing a structural shift: the gradual replacement of ICE vehicles with EVs, combined with the continued adoption of low-antimony battery designs, is expected to drive a ~4% annual decline in demand from the lead-acid battery sector through 2035. Flame retardants demand is projected to offset the decline with an average growth of 3.6% per year. Increase is driven by electronics production, which requires fire-resistant electrical wiring and circuit boards, as well as rising EV adoption, which supports demand for ATO in battery enclosures and other electrical components.

Substitution remains limited in some strategic applications. For example, antimony is used to harden certain munitions, where performance requirements can restrict the use of alternatives.

## Uses of Antimony




## Antimony end-use demand outlook 2028 - 2035




Sources: Demand volumes are S&P Global Analysis leveraging Project Blue data

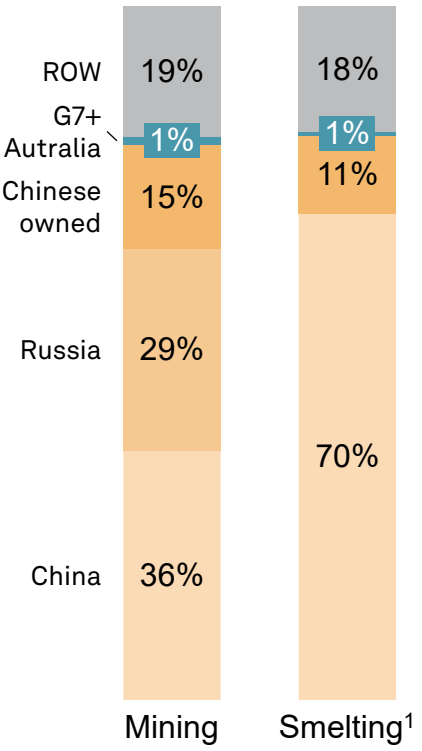
# Antimony supply

Global antimony supply is highly concentrated, with Chinese and Russian-controlled operations dominating both mining and smelting. These operations account for approximately 80% of the world's mine supply and 81% of its processing capacity[1].

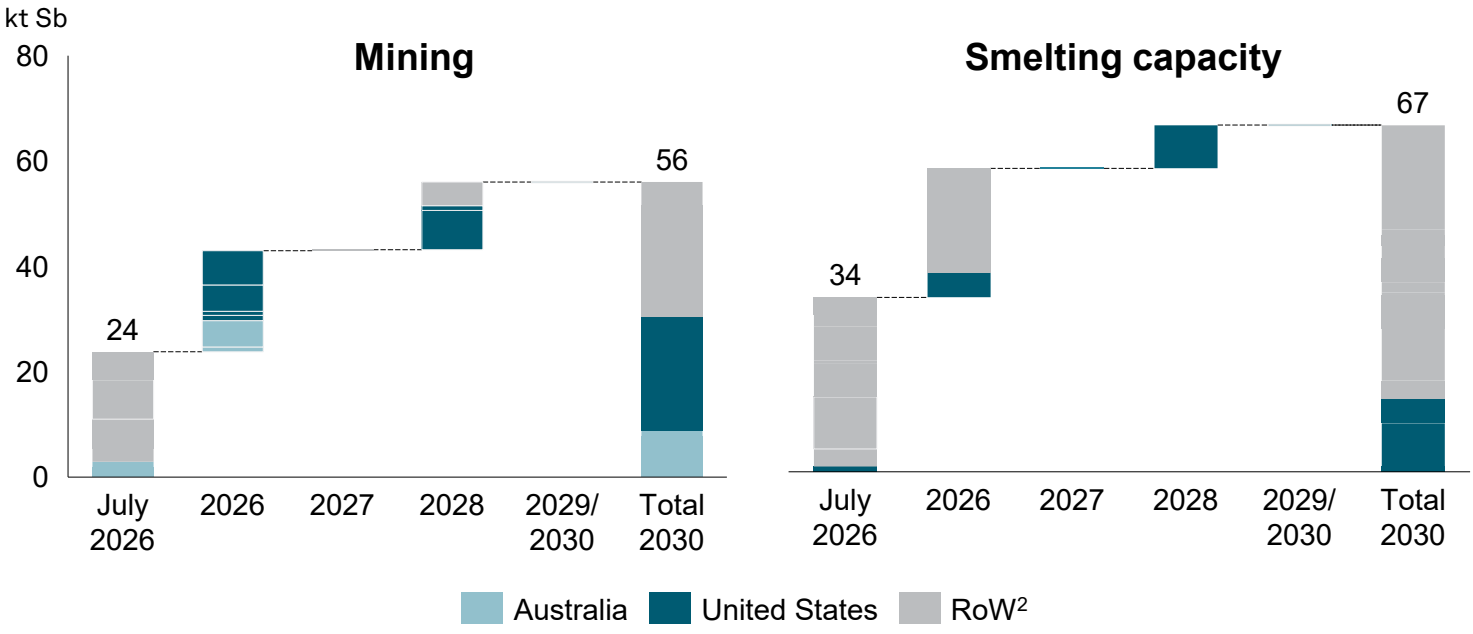
Outside of China and Russia, 2025 antimony mine capacity stands at ~24 kt, with ~71% concentrated in Tajikistan, Türkiye, and Bolivia. By 2030, 10 new mining projects can add ~32 kt capacity, with 85% located in the US and Australia. Around 75% of this new capacity is tied to gold mines where antimony is produced as a by-product, making supply dependent on gold economics and operators' decisions to recover and process antimony.

On the processing side, 2025 operating smelting capacity outside of China and Russia is ~33 kt, with 60% located in Tajikistan, Thailand and South Korea. Only a few of these facilities are vertically integrated, notably ODAŞ in Türkiye and Anzob in Tajikistan. By 2030, three potential smelters can add ~34 kt of smelting capacity: a 20 kt smelter in Oman, and additional smelters in the USA. However, these new processing projects can face feedstock constraints given the lack of captive domestic mine production.

**Market Structure (2025)**




**Antimony ex-China and ex-Russia supply potential**

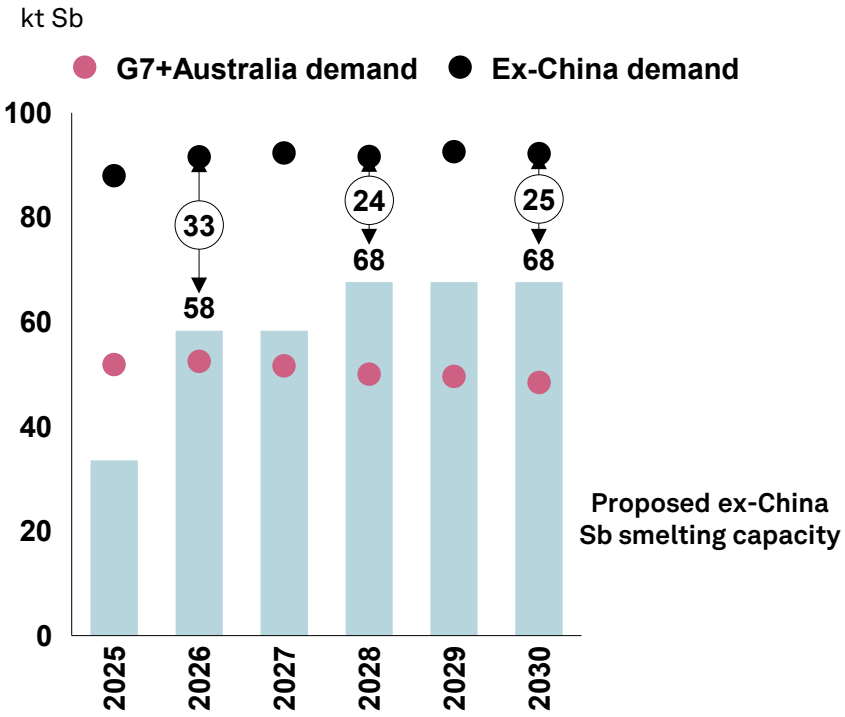



**The supply chart represents potential risked supply pipeline based on company announcements**

1. China's processing capacity is estimated as the 2025 global antimony demand minus the capacity of all facilities not owned by Chinese entities. 2 Rest of the World
Sources: S&P Global, USGS (Antimony 2026 Commodity Summary), Project Blue market data was used for the regional breakdown of mine production in 2025

# Supply demand balance

## Supply demand balance outside of China and Russia




- In 2026, with the delivery of the two announced projects, available ex-China Sb processing capacity totals at 58 kt Sb, leaving a supply gap of ~33 kt Sb with ex-China demand.
- By 2028, the addition of ~9 kt Sb from two proposed smelter projects reduces the gap to ~24 kt Sb.
- By 2030, even if the announced projects are delivered and ramp up as planned, smelting capacity gap is ~25 kt Sb.

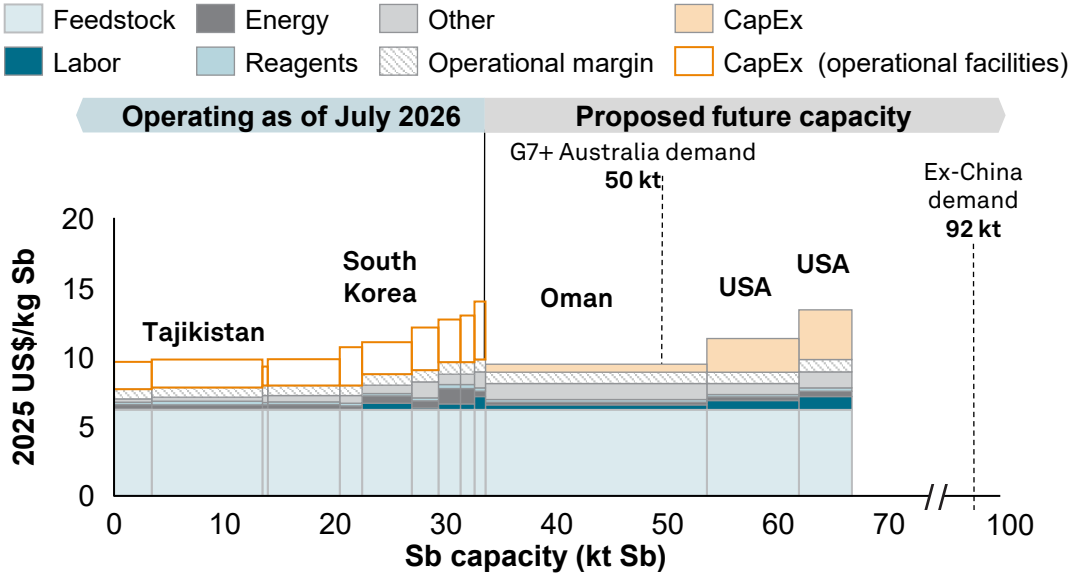
## Recent market events

- Targeted to begin operations in August 2026, Larvotto Resources' Hillgrove Gold-Antimony Project is set to produce ~4,900 mt/year of Sb concentrate over a 7-year mine life. This commissioning will establish Larvotto as the largest antimony producer in Australia [Larvotto Resources, July 2026].
- US Antimony Corp. received $12.8M DoW funding for Thompson Falls smelter expansion [US Antimony Corp , May 2026].
- Under a sole-source IDIQ (Indefinite Delivery Indefinite Quantity) contract worth up to $245 million from the U.S. Defense Logistics Agency, US Antimony Corp. is supplying antimony metal ingots to replenish the U.S. National Defense Stockpile [US Antimony Corp, March 2026]. Based on the Q1 2026 report, first two deliveries were completed [US Antimony Corp , May 2026].
- Perpetua Resources, supported by $87 million in federal funding since 2022 to develop Stibnite Gold Mine, partnered with the US Army and Idaho National Laboratory to open a new antimony pilot plant [Platts, July 2026].
- Australia's A$1.2 billion critical minerals strategic reserve has prioritized antimony (alongside rare earths and gallium), but miners raised concerns about physical stockpiling [Platts, May 2026].

Sources: S&P Global Analysis for proposed projects; S&P Global Analysis based on Project Blue data for demand

# Antimony structural cost

## 2028 Antimony smelting structural cost curve




**Structural Cost:** Represents the full cost required for an asset to achieve its target return on investment, assuming projects are developed in line with announced timelines and operate at capacity. This cost considers an unrisked projection subject to normal industry attrition and delays.

## Structural cost - Findings

- S&P Global CERA estimates that a structural cost range of between **$11/kg and $13/kg** for antimony smelting in 2028 would support economic operations for at least 80%, or 54 kt Sb, of current and possible antimony supply, 4 kt Sb more relative to G7+Australia demand. Excluding CapEx, a cost range between **$8/kg to $9/kg** would be sufficient to sustain operation of these projects once commissioned.
- Feedstock costs are typically the largest component of Sb structural cost. As there is limited transparency around concentrate sourcing and pricing, feedstock costs were estimated using a common ex-China mining cost assumption across all assets
- Antimony production structural costs in 2028 are expected to range from ~$9/kg to ~$14/kg Sb. Cost differences are primarily driven by project maturity, location, and scale, with capital costs being the main source of variation given the capital-intensive nature of smelting

## Structural cost - Approach

- Reflects Market Complexity: Built on extensive research and bottom-up modelling, incorporating asset-level data, industry consultation, benchmarking, and expert assumptions to navigate a highly opaque supply chain
- Targets the Marginal Supplier: The 80th-90th percentile identifies the highest-cost producers. Long-term commodity prices naturally gravitate toward the cost of the last unit needed to meet demand. This percentile filters out extreme outliers while capturing the true marginal cost
- The methodology anchors on the smelting cost curve's marginal producer, considering a fixed feedstock costs for all assets
- Incentivizes Supply Resiliency ex-China and ex-Russia: It establishes a long-term structural benchmark - not a short-term forecast - capturing the full asset economics

Sources: S&P Global

# Challenge of cost components and methodological approach


**Feedstock:** Feedstock costs were based on the annual 90th percentile production cost of the antimony mining cost curve, representing the marginal producer required to meet 90% of accessible supply. As antimony is often produced as a by-product of gold, silver, or base metals, cost allocation was based on expected project economics at FID. For non primary Sb mines where another primary commodity accounted for ≥80% of expected revenue, antimony-specific processing costs assigned to Sb. For all other operations, costs were allocated based on each commodity's share of expected revenue using consensus price assumptions.

**Labor:** Labor costs are estimated using asset archetype labor costs and adjusted for asset capacity and country wage differences.

**Energy**: Includes fuel, power, and utility costs estimated from asset archetypes and adjusted for country-specific energy prices. Power costs are based on archetype electricity consumption and local wholesale electricity prices.

**Reagents:** Reagent costs were estimated using asset archetype reagent costs and adjusted for regional differences in reagent prices.

**Operational margin:** A 10% operational margin was applied to facility OPEX costs to represent facility-level profitability. This adjustment shifts the curve from a cost basis to a price-like basis.

**CAPEX:** Includes levelized initial CAPEX, allocated to each facility and recovered over a 20-year project life using a 7% discount rate to reflect the time value of money, as well as sustaining CAPEX representing ongoing investments required to maintain operations and productive capacity, estimated as a percentage of initial CAPEX.

**Structural cost variability reflects uncertainties in key project assumptions, including capital costs, discount rates, utilization levels, and economies of scale. The low-end estimate of ~$11/kg Sb represents favorable assumptions for project execution and financing, while the upper-end estimate of ~$13/kg Sb reflects less favorable assumptions and higher capital intensity. Values are preliminary and will be refined through industry consultation and stakeholder review.**

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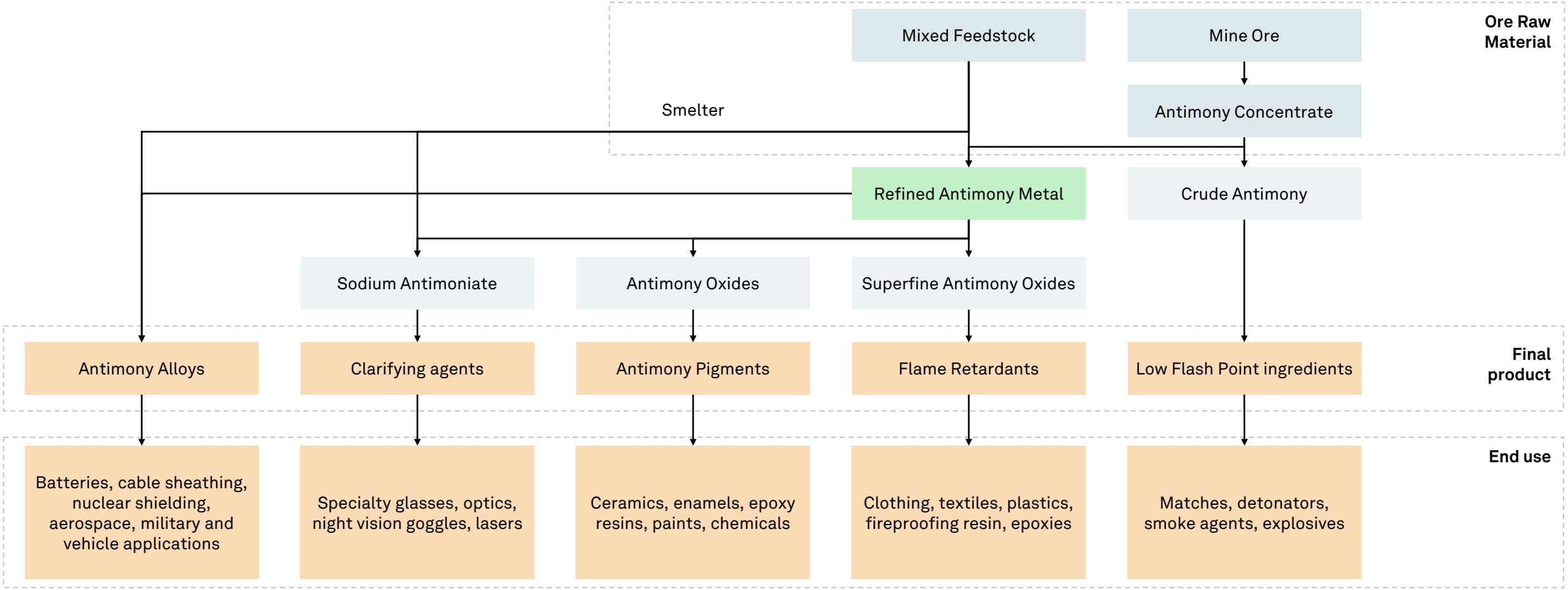
# Antimony flowsheet



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