

Industrial metals

China's curbs on metal germanium create 'desperate' supply squeeze

Prices for material used for thermal imaging systems in military equipment at 14-year high



Traders say demand for germanium, which is used in military equipment, is 'through the roof' © John Moore/Getty Images

Camilla Hodgson in London and **Nian Liu** in Beijing

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Chinese export restrictions on germanium, a metal crucial for the defence industry, have created a “desperate” supply crunch and pushed prices to their highest level in at least 14 years, traders say.

Germanium is essential to the production of thermal imaging systems used in military equipment, including fighter jets. But its production is heavily dominated by [China](#) and companies do not typically hold large stockpiles.

China said in 2023 that it would [halt the export of germanium, gallium and antimony](#) following restrictions by the US and the Netherlands on advanced chips and chipmaking equipment. However, traders and analysts said exports started to nosedive in earnest from the end of 2024 onwards.

Terence Bell, of minor metals trader Strategic Metal Investments, said he had been unable to buy germanium for at least six months, with shipments from China having “completely dried up”.

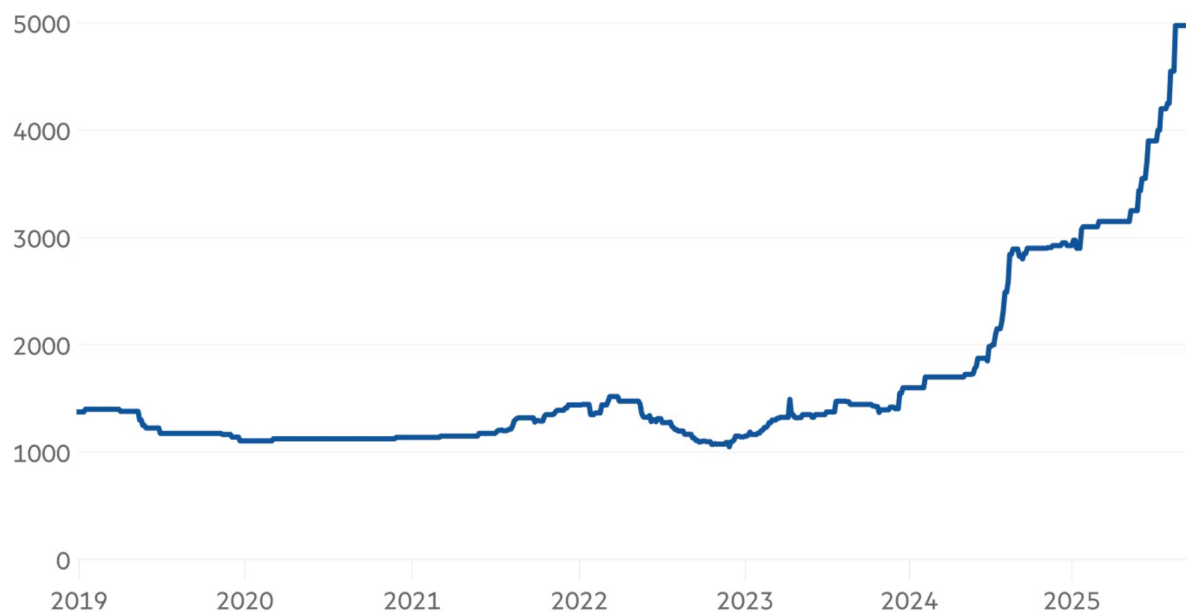
“I spent my whole summer taking two to three [inquiries] a day from companies looking for germanium,” he said. “It’s desperate out there.”

US imports of germanium from China fell about 40 per cent between January and July compared with the same period in 2024, according to an analysis of trade data by Silverado Policy Accelerator, a non-profit organisation.

As of Wednesday last week, the price of germanium had risen to almost \$5,000 a kilogramme, compared with just over \$1,000 at the start of 2023, according to price reporting agency Fastmarkets. The September price is the highest ever recorded by Fastmarkets, in data going back to 2011.

The price of germanium has risen sharply this year

\$ per kg



Source: Fastmarkets

Christian Hell, of trading house Tradium, said germanium demand was “through the roof”, with requests coming mostly from the US and Europe.

“Almost everybody is approaching us” and there was “panic” in the market, with Tradium unable to fulfil “all the enquiries we’re getting”, he said.

The Chinese restrictions have “devastated the ability for there to be a functioning spot market”, said Aaron Jerome, a trader at Lipmann Walton & Co. “People we used to be able to buy 100kg from, we’re lucky now if they can give us 10kg, and the price is three to four times higher.”

Like rare earth elements, germanium is economically and practically challenging to extract rather than globally scarce. It is commonly produced as a byproduct of zinc and coal fly ash.

Russia has historically been a supplier of germanium, but sanctions imposed on the country following its full-scale invasion of Ukraine have contributed to supply shortages in the west.

China's germanium exports have nosedived

Wrought and unwrought metal (kg)



Source: Chinese export data

In a notable signal to the market, US defence group Lockheed Martin announced in August a germanium supply agreement with producer Korea Zinc.

Since the purchase of germanium has historically been outsourced by defence

companies to subcontractors, the deal was “a signal” of how challenging the market had become, said Jerome.

Global germanium demand is about 180 to 200 tonnes a year, according to Fastmarkets.

Finding substitute materials is difficult, in part given the “performance and precision requirements” of the military optics applications that germanium goes into, said Caroline Messecar, a Fastmarkets analyst.

“You might need a complete redesign and there are situations where any potential reduction in accuracy is unacceptable,” she said.

Florida-based LightPath Technologies, which has received US government funding, is working on providing alternatives. “No one in their right mind is going to redesign an existing system until they have to,” but some companies were now starting to do so, said LightPath’s chief executive Sam Rubin.

Outside China, the Belgian battery materials producer Umicore and Canadian miner Teck Resources — which this week announced a \$50bn [tie-up with Anglo American](#) — produce some germanium.

Nyrstar, a subsidiary of trading house Trafigura, is also considering building a germanium and gallium recovery and processing facility at its zinc smelter in Tennessee.

China’s Ministry of Commerce did not respond to a request for comment.

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