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Mytilineos: The "geopolitical play" with Gallium and the new investments

The intense activity in RnD and the new modern investments brought the European demand for gallium production from Mytilineos, against China. The critical metal's price, production method and valuable uses.



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The Commission's request to Mytilene **MYTIL +2.56%** to proceed with the production of gallium , a metal of **strategic importance** for the production of microchips and other technological products, came to confirm in an absolute way the investment modernization strategy followed by the group. But also his insistence for a long time, to include aluminum in the law on " **vital raw materials** " of the European Union, (Critical Raw Materials Act), from the list of which it was initially left out!

The reasons that led to the EU's request for Gallium are purely **geopolitical** . The tension of the West with China and the barriers to export to it of specific technologies, led the Asian superpower to retaliate, firstly imposing restrictions on the export of two critical metals: germanium and gallium.

In the rather unknown metal to many, China currently owns almost **95%** of world production. In other words, she is absolutely dominant. However, its importance is great, since although it is not produced or used in huge quantities, it has two very important fields of application, without corresponding substitutes. **Integrated circuits** (IC) and **optoelectronic devices** .

In particular, solid gallium alloys are used in optics, electronics and nuclear engineering due to their non-toxicity and resistance to neutron radiation and beta decay. In addition, gallium is used in alloys with other metals such as aluminum, copper, and tin to create gallium arsenide (GaAs). This is used in the manufacture of semiconductors, one of the most important uses of gallium. It is a critical component in many stages of the manufacturing process for computer chips and other electronic devices, with applications from radar to photovoltaics.

In other words, Europe, faced with the prospect of further tension in geopolitical relations, has no other choice but to ensure **self-sufficiency** within its borders. Something that now raises the geostrategic importance of Mytilineos itself.

The price and production of France

Due to its almost exclusive production from China and the limited quantities available for specific uses, the price of gallium is not traded daily on stock exchanges, and as a rule it concerns kilograms and not tons. However, according to a report by Bloomberg, immediately after China's announcement, its price reached **326 dollars per kilogram** , showing an increase of 27%. Smaller quantities, according to strategicmetalsinvest.com, which is aimed at investors, were last sold at a price of **\$586 a kilogram** . Due to increased demand as well as restrictions in China, there are expectations for a further rise.

Gallium is not mined - it is obtained as a by-product of the mining and processing of other metals, mainly aluminium, zinc and copper. However, the most important primary source for gallium is **bauxite** . About 90% of today's primary gallium production is extracted from bauxite during the production of alumina.

Current global primary production of gallium is estimated at over 400 metric tons of which over 200 tons must be of " **high purity** " to be used in electronic systems, while demand is expected to rise in the coming years. As mentioned above 95% of gallium is currently produced in China, while beyond Europe, the United States itself is now 100% dependent on foreign sources for gallium.

The role of R&D in Mytilineos

MYTILINEOS achieves and meets the requirements because it has developed a dynamic RnD (Research and Development) organization, which actively participates in the development of new technologies for the production of materials that find application in high-tech products, such as ultrapure alumina used in **LED** products , scandium for aluminum-scandium superalloys (Al-Sc), gallium used in semiconductors, vanadium for batteries and others.

One of these research projects called Valore (Small-scale pilot tests for the extraction of Ga (& V) from Bayer liquors from alumina production) which started in early 2022, concerns precisely the treatment of liquid solutions for gallium production, but and **Vanadium** , from the production of alumina.

It is typical in general that the total funding of MYTILINEOS' TED Metallurgy from the research programs, in the period 2017-2026, exceeds 11 million euros. Also, the company, through the EBA activity of the Metallurgy sector, is positioned among the **pioneer** companies of the aluminum sector worldwide in the field of research for the utilization of bauxite residues, as well as the recovery of rare earths.



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The new Alumina Production unit

The already planned expansion of the industrial alumina production unit, in order to achieve an annual production capacity of 1,250,000 tons of hydrated alumina, also plays a role in the company's ability to respond to the EU request.

The company's existing alumina and aluminum factory is one of the strongest **pillars** of the Greek industry, with an annual production capacity of **900,000 tons of alumina and 185,000 tons of precast aluminum**. According to the company, the industrial complex in Ag. Nikolaos Voiotias directly and indirectly employs more than 1,500 workers applying production and commercial practices comparable to the leading metallurgical industries worldwide.

Through this investment, authoritative sources report, it becomes one of the largest producers worldwide, consolidating its position in the International Market. With the expansion of the existing plant, the total annual production capacity of alumina in Greece will approach **1.25 million tons** and Greece will be placed among the twelve largest alumina producing countries worldwide.

The project is expected to consolidate the leading role of the Greek alumina industry in the Europe/N market. Africa and the Middle East. The amount of metallurgical alumina that will be produced by the expanded plant will increase Greece's share of the global alumina market (merchant market excluding China) by 1.5%. In addition, an increase in the exports of Greece's trade balance is expected, which will occur with the start of the production operation of the expanded industrial unit.

Aluminum demand, which determines the demand for alumina at the international level, has been growing continuously in recent years and because it is mainly driven by the construction and automotive sectors, but also by the performance of the packaging and machinery sectors, it is expected to continue to be developing. In addition, many governments are strengthening **incentives** for infrastructure development in order to improve economic conditions combined with global trends, such as the shift to lighter vehicles, and for this reason aluminum demand is expected to rise.

In particular, in the area of immediate interest of MYTILINEOS (Europe, North Africa, the Middle East and the Black Sea), it is expected that the supply-demand balance of metallurgical alumina will remain in deficit for years to come (according to **Wood** -Mackenzie data, in 2025 the deficit in Europe will be over 2.5Mt, while in the Middle East, North Africa and the Black Sea at 9.5Mt).

By extension, the new alumina production is expected to cover a significant amount of gallium as well.

#Mytilineos, Mytilineos

#Industry Europe

#Greek Industry