

Four Things You Need to Know About Ore & TiO₂

Understanding factors that affect supply reliability and what it means for your business

Did you know the global [titanium feedstock](#) value chain has a current estimated value of [\\$20.9 billion](#)? From paints and industrial coatings to PVC decking and consumer packaged goods (CPG), Titanium dioxide (TiO₂) plays a critical role in the materials we buy and use every day.

The silent enabler of all these industries is ore. Titanium minerals, also known as titanium feedstocks, are mined, extracted, and concentrated globally from Mozambique to Kenya and from Madagascar to Australia or the U.S., so even minor changes to production or demand can drive the cost way up. The tight balance between supply and demand often results in concerns around supply security. As one of [the world's largest manufacturers of titanium dioxide](#), we have our finger on the pulse of industry trends and can share a few key considerations to help you better plan and protect your supply chain needs.

1. Feedstock Doesn't Grow on Trees:

Even though titanium is the [ninth-most abundant element on earth](#), it is difficult to find economically viable concentrations of it, in order to mine and manufacture. Because of the complexity of titanium mining, some industry obstacles include [smaller and more difficult access to orebodies](#), rising energy costs, and [older mines becoming depleted](#). Due to the global nature of titanium product mining, areas with geopolitical risks, logistical issues, and the lack of predictability of natural disasters like fires, landslides, or flooding, mines are more susceptible to infrastructure shortages or disruptions, causing manufacturing delays. Mining ore is all about finding the right stock at the right place and the right time.

2. Challenges to TiO₂ Manufacturing:

Manufacturing ore can be just as challenging. Because of declining mine quality, ore particles can be harder to use. Due to a mine's geological location, there could be various chemical processes, combined with different ores that could breach quality or environmental concerns. Just because titanium is abundant does not mean that all TiO₂ is created equal. Lower cost TiO₂ can result in products that have [inferior durability, consistency, and color vibrance](#). This, in turn, leads to corrections down the road, resulting in higher production times and cost.

3. The TiO₂ Value Chain Supply and Demand & Direct Business Implications:

Unsurprisingly, the TiO₂ value chain involves a tight supply and demand balance. In countries like Australia or Mozambique, it can often take several months from the time titanium is mined to be manufactured, regulated, and distributed. This can be due to large weather events like cyclones or extreme winds, which are unsafe for workers. In this scenario, the inventory could sometimes be higher to help accommodate larger lead times. Or, in countries like South Africa, it's possible to have crowded ports, which could cause a backup and delay of distribution. Due to the finite quantity of quality ore available, the industry involves high-capital, sometimes long delays, and detailed regulations in place to ensure workers' and consumers' safety.

Any of these events can result in delayed production times or volatile pricing and have a clear material and economic impact on your business. But don't worry, [Chemours](#) is here to help you plan and manage your business needs.

4. We're Industry Experts – for a Reason:

Chemours has been manufacturing [Ti-Pure™ TiO₂](#) for nearly a century with a trusted industry-leading process, technology, and safety standards. We have diversified sources of ore, including our Florida/Georgia mining complex that we've operated since 1949, as well as manufacturing sites in New Johnsonville Tennessee, Delisle, Mississippi, Altamira, Mexico, and Kuan Yin, Taiwan. We've continued to add new mining facilities over the last several years, including Trail Ridge South in Clay County, Florida that will incorporate [Mobile Mining Units \(MMUs\)](#), which allow for lower emissions, reduced dust levels, and lower safety risks. This new technology will recycle 98% of water used in mineral transport and separation, minimizing the environmental impact, restoring land back to its productive mining use, and reducing industry dependency on traditional mining.

We maximize production, despite feedstock variability-and we won't compromise product quality. At Chemours, we work with our dedicated supply chain partners, so we can help meet your business needs where you are.

Through our online eCommerce solution, the [Ti-Pure™ Flex Portal](#), we're available to meet the needs of TiO₂ buyers who need maximum flexibility (read: no contracts or long-term commitments). Flex allows you to view market-based pricing with up to 6-month lead times, place and modify orders online, and review order history 24/7. With the right tools and information, you can better plan for your business.

[Contact Us today](#) to learn how we can partner together to meet your TiO₂ needs.