

Navigating a New Era of Sustainability: How TiO₂ Innovation Can Advance the Coatings Industry



Sustainable products represent the future of the coatings industry.

Between the continued regulatory pressures, increasing frequency of severe weather events, heightening temperatures, and rising sea levels, sustainable offerings are no longer optional for coatings producers, they've become a must.

Customers around the globe are also demanding more sustainable solutions. Facility owners with outdoor equipment today require more durable and longer lasting coatings to protect their assets from increasingly harsh weather environments. Homeowners are also seeking ways to decrease the carbon footprint of their homes by using environmentally friendly products at all stages - including the paint used to cover the interior and exterior walls.

As the world pushes to create a more sustainable future, coatings producers are looking to minimize the impact of their products on the environment, public health, and society at large. However, the ultimate question for formulators remains how to deliver higher levels of product sustainability efficiently and effectively, without raising costs or compromising performance and quality.

TiO₂ innovations are key to achieving sustainable coatings

The raw materials used in coatings formulations, including titanium dioxide (TiO₂) can make a significant impact on the end product's sustainability profile. New innovations will pave the way to reducing waste, creating longer lasting products, and achieving advancements in the coatings industry's sustainability. As one of the largest manufacturers of TiO₂ with an aspiration to be the world's most sustainable TiO₂ enterprise, we at Chemours see several impactful opportunities for TiO₂ innovations to help drive the industry forward.

This is a major reason why we [recently introduced](#) the [Ti-Pure™ Sustainability \(TS\) series](#), a product portfolio consisting only of TiO₂ grades that advance our customers' and our own sustainability goals. The grades included in this product suite are specifically designed to empower coatings formulators, as well as our plastics and laminates customers, to create high-quality, long-lasting products that reduce material consumption and CO₂e emissions.

Grades driving sustainability across the value chain

There are numerous ways high-quality TiO₂ can contribute to a coating's overall sustainability impact. Certain grades, like Ti-Pure™ TS-6300 (one of the first grades included in the TS series), are highly opaque and enable vastly superior hiding power and greater light scattering efficiency compared to traditional grades. This greater performance results in a higher spread rate, which reduces the total amount of paint required to cover surfaces, and therefore reduces the carbon footprint per square meter covered.

The [Ti-Pure™ TS-6300](#) pigment is so effective at scattering light that high-opacity paints using this pigment can often cover and protect surfaces in one coat. With less paint required to cover the same surface, less paint components will also be needed, including binders, additives, and paint can packaging, further reducing the product's overall footprint. Beyond decreasing the required material resources, using Ti-Pure™ TS-6300 can also lead to a substantial reduction in greenhouse gas (GHG) emissions from chemical and packaging manufacturing and distribution. Requiring fewer coats also reduces the use of freshwater, a critical natural resource.

[Ti-Pure™ TS-6200](#) is another grade included in the TS series that's specifically designed to advance sustainability, minimize climate impact, and maximize resource efficiency through extended product life and avoided waste. Ti-Pure™ TS-6200 is a super durable





coatings grade that has efficiency and durability at its core: it requires less energy to grind, is easier for customers to disperse, provides high initial gloss and excellent gloss retention. Ti-Pure™ TS-6200 provides extended coating lifetime by balancing weathering and gloss and consistently outperforms competitive pigments in gloss and tint retention in a wide variety of applications. This enhanced performance reduces maintenance and repaint frequency which ultimately extends the life of the asset and thus reduces the asset footprint.

Superior impact measurement

As a part of the TS series launch, Chemours is adding enhanced product sustainability designations—resource efficiency, circularity, health & wellness, and climate impact—across its entire portfolio to enable at-a-glance sustainability comparisons, helping customers better quantify and advance their sustainability objectives.

Taking impact measurement a step further, we've also created the [Ti-Pure™ TS-6300 Environmental Footprint Calculator](#) to help customers quantify the environmental impact reduction of using this grade. This calculator puts the environmental benefits in specific, quantifiable terms that coatings formulators and their customers can understand.

For example, this calculator finds using Ti-Pure™ TS-6300 to cover a 13,660-square-meter surface will require 83.94 fewer liters of paint than if traditional grades were used. This efficiency also results in 167.26 kilograms of avoided CO₂e, 46.97 fewer liters of freshwater in the can, 50.65 fewer liters of landfill waste, and 2.87 kilograms of CO₂ avoided per 200 kilometers shipped. By helping quantify environmental impact, coatings formulators and customers can better measure their footprint and take additional, more informed steps to reduce their environmental impact now and in the future.

1000

liters of paint made with
Ti-Pure™ TS-6300



13,660

m² Area Covered

Your Environmental Impact Reduction with Ti-Pure™ TS-6300 Results:



83.94

Fewer liters of paint used



167.26

Kg of CO₂e avoided



46.97

Fewer liters of water in the can



50.65

Fewer liters of landfill waste



2.87

Kg of CO₂ avoided per
200 km shipped

Building a brighter tomorrow

For nearly a century, Chemours has delivered high-quality TiO₂ to coatings formulators around the globe. Guided by industry-leading innovation, technical expertise, and tight customer collaboration, we believe we have an opportunity and an obligation to advance sustainability, moving our industry and our planet forward. This is more important now than ever as the pressure on coatings formulators to reduce their environmental impact is coming from all sides, with new government regulations, international guidelines, and consumer demands calling for more sustainable products. By utilizing high-quality TiO₂, formulators can produce long-lasting coatings products that limit material usage and CO₂ emissions, thus doing their part to create a more sustainable future for our shared planet.



About Ti-Pure™ Titanium Dioxide from Chemours

Ti-Pure™ titanium dioxide (TiO₂) from Chemours strives to make the world brighter, more durable, and efficient by tackling some of society's greatest challenges through TiO₂ innovation and reliability. For nearly a century, we have produced and delivered high-quality TiO₂ for customers around the globe in coatings, plastics, and laminates applications. Guided by industry-leading innovation, technical expertise, and continued collaboration, we're committed to moving our customers and our planet forward.

[Watch a short video to learn more.](#)

Paints that contain Ti-Pure™ offer:

- ◆ **Better Processability:** High-quality Ti-Pure™ TiO₂ pigments ensure consistency from batch to batch.
- ◆ **Superior Hiding Power:** Creating brighter brights and whiter whites, Ti-Pure™ increases hiding power for uniform, one-coat coverage without needing to prime.
- ◆ **Ease of Application:** With fewer drips, smoother brush strokes, and faster drying times, Ti-Pure™ pigments boost paints' productivity.
- ◆ **Uncompromising Endurance:** The UV protection afforded by Ti-Pure™ leaves a durable, washable surface that resists fading, cracking, and discoloration over time.



For more information, visit [tipure.com](https://www.tipure.com) or contact us at [tipure.com/en/contact-us](https://www.tipure.com/en/contact-us).

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