Ti-Pure™

R-104 Titanium Dioxide

Designed for Use in most Thermoplastic Polymers

Enhancing the quality of your masterbatch

Thermoplastics Everywhere! The wide variety of thermoplastic packaging applications range from yogurt cups, lotion bottles, and candy wrappers to t-shirt bags and frozen food packages to name just a few. The dizzying array of new products on store shelves is rapidly being outpaced by the new designs in product packaging to bring visual appeal, convenience, and ease of use to the consumer.

Chemours™

Ti-Pure™ R-104 titanium dioxide provides an integrated solution to address the most demanding concerns in the harshest of applications

Achieving the right visual impact and delivering the necessary product performance characteristics are keys to success. For both masterbatch producers and converters, consistent product quality, reliability, and flexibility to meet the ever changing demands of the marketplace are essential.

Titanium dioxide is a central ingredient to imparting the clean, bright whites or fine tuning the shades of color for the right eye appeal. However, not all TiO2 products are created equal.

Ti-Pure™ R-104 rutile titanium dioxide is a benchmark product made from a proprietary chloride manufacturing process, designed to create a brighter, whiter pigment. It is a dry, fine white powder specifically formulated for plastics.

Ti-Pure™ R-104 titanium dioxide has been engineered to deliver:

- Brighter, cleaner whites
- Higher throughput rates
- Exceptional processibility
- Superior high temperature performance.

So that masterbatch producers have the confidence to run higher concentrations of pigment in their processes faster, more reliably, and more consistently.

Technical Innovations

Ti-Pure™ R-104 is designed with a unique combination of properties that deliver superior performance and unsurpassed quality.

High Tinting Strength

Ti-Pure™ R-104 provides opacity and whiteness beyond industry standards, while its carefully controlled particle size results in a very blue undertone to yield a cleaner, bluer white.

Advanced Surface Chemistry

Ti-Pure™ R-104 achieves lower masterbatch viscosities, allowing the compounder greater flexibility to use a variety of more economical resins to match processing conditions, by minimizing the effect on the melt properties of masterbatches.

Strong Resin Affinity

Ti-Pure™ R-104 “wets” easily into resins and is readily incorporated. This results in up to 25% faster throughput than other general purpose grades of titanium dioxide and greater flexibility at a variety of pigment loadings.

Excellent Lacing Resistance

Ti-Pure™ R-104 prevents defects in high temperature processes, such as extrusion coating and cast film applications.

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Ultimate Dispersion Performance

- Better dispersion is achieved with Ti-Pure™ R-104 in resins versus conventional pigments as demonstrated with its extremely low screenpack retention values, resulting in easier downstream processing and greater product uniformity.
- Higher final product quality is realized as well, with fewer visual or film imperfections normally caused by lumps from poorly dispersed pigments.

Figure 1

Ultimate Dispersion Performance

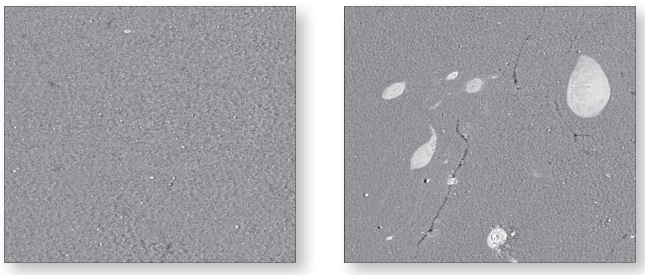
Ti-Pure™ R-104 | Typical General Purpose Grade

Microscopic Perfection

- In film applications, Ti-Pure™ R-104 is so well dispersed that it is virtually "invisible," fully integrated into the resin.
- Another general purpose titanium dioxide leaves its tracks and marks in the finished product—unsightly streaks and spots.

Figure 2

Microscopic Perfection



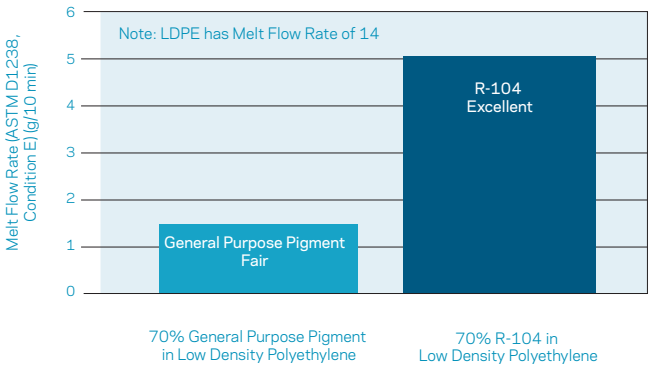
Ti-Pure™ R-104 *20.0 kV x300 10µm* | Typical General Purpose Grade *20.0 kV x300 10µm*

Robust Melt Index Characteristics

- Easier processing is achieved with Ti-Pure™ R-104 versus other conventional pigments. In a typical 70% pigment masterbatch, Ti-Pure™ R-104 delivers a higher desired melt flow rate. Consequently, the resulting lower viscosity gives the masterbatch producer greater flexibility to select from a wider variety of melt flow index (MFI) resins.

Figure 3

Improved Melt Flow Rate of a 70% Pigmented Masterbatch

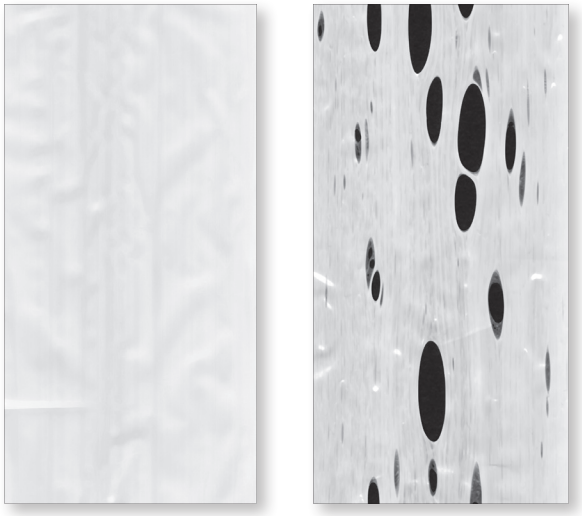


Extreme Lacing Resistance

- Avoid holes, tears, and downtime from pigments that can't take the heat.
- Ti-Pure™ R-104 is unscathed at even 600 °F!

Figure 4

Extreme Lacing Resistance



Ti-Pure™ R-104 | Typical General Purpose Grade

Ti-Pure™ R-104 — Request Your Sample Today!

Ti-Pure™ R-104 titanium dioxide — for the variety of demanding thermoplastic applications, there is a clear pigment choice that delivers superior results every time — Ti-Pure™ R-104. It is available in 25 kg polyethylene bags to eliminate fiber contamination from paper bags. It is also available in one metric tonne flexible intermediate bulk containers where larger volumes are processed.

For more information, visit www.titanium.chemours.com

Replaces: K-04370
C-10429 (1/18)