



Ti-Pure™ R-960 Titanium Dioxide

Grade Snapshot

Product Information

Product Description

Ti-Pure™ R-960 is a rutile titanium dioxide pigment, manufactured by the chloride process that produces the brightest white TiO_2 delivered as a fine, dry powder. This grade is the ideal TiO_2 solution for durable color plastics applications and provides maximum gloss retention and efficient UV protection.

Ti-Pure™ R-960 is designed with a particle size distribution tailored for low tinting strength and broad spectrum reflectance, a silica encapsulation that increases durability through reduced photocatalytic degradation, and an alumina layer to improve dispersibility and bulk handling.

Available in 25 kg bag or 1 metric ton (1000 kg) FIBC packaging.

Key Features

- Outstanding durability that extends the lifetime of outdoor goods
- Uncompromising weathering resistance
- Unique optical space that supports reduced colorant dosing in intensely colored durable plastics
- Characteristics that boost formulas for intensely colored, high-gloss applications at low-colorant dosing
- High solar reflectivity that controls heat build-up, minimizing heat deformation and oil canning

Suggestions for Use

Ti-Pure™ R-960 is frequently found in building products for intense, colored outdoor applications such as windows, gutters, decks, and fences; Stadium seats; High-end patio furniture; Automotive body panels.

Ti-Pure™ R-960 delivers performance that stands out among durable TiO_2 offerings. It has a unique combination



of low-tinting strength, high UV absorption, and broad IR scattering that work together to minimize total colorant cost for durable colored plastics, while providing the required level of light protection.

Colored Exterior Plastics

Ti-Pure™ R-960 supports expanding consumer preference for colorful exterior plastic products by providing UV protection and preventing heat deformation that can occur when dark plastics absorb sun light. While the high tinting strength of TiO_2 causes whitening that makes dark color formulation difficult and expensive, Ti-Pure™ R-960 is able to provide light protection at a lower tinting strength than other durable TiO_2 grades, meaning that colorant dosage can be reduced.

Non-Painted Automotive Plastics

As plastics replace traditional materials in vehicle construction, one goal is to achieve similar appearance properties without additional coating steps. Ti-Pure™ R-960 is ideal for this application because it delivers durability and unmatched flexibility in color formulation, all with strict batch-to-batch consistency.

Table 1. Physical Properties

Property	Ti-Pure™ R-960
Titanium Dioxide, wt%, min.	89
Alumina, wt%, max.	3.5
Amorphous Silica, wt%, max.	6.5
Organic Treatment	None
Specific Gravity	3.9
pH	7.4

Note: All values are typical unless otherwise specified.

Figure 1. Optical Properties

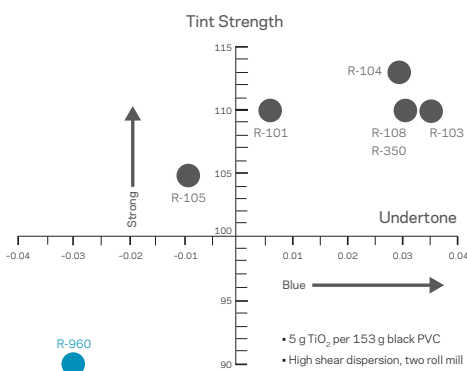
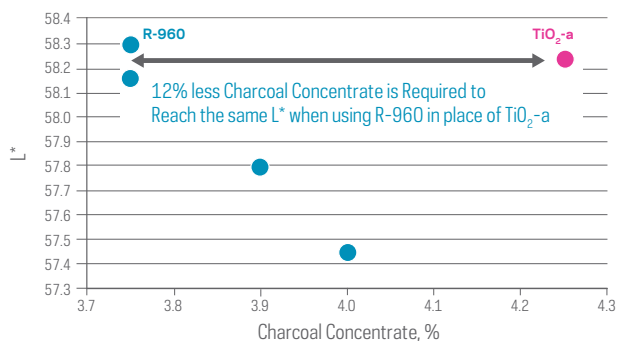
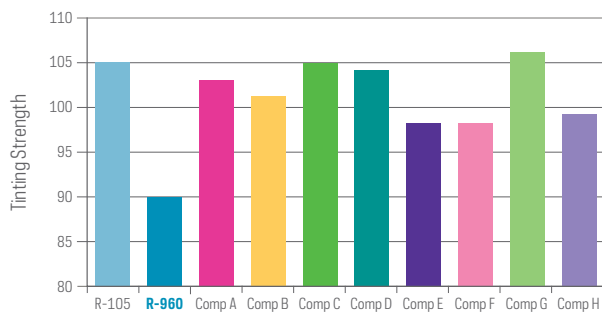


Figure 2. Optimum Tint Strength for Deep Colors



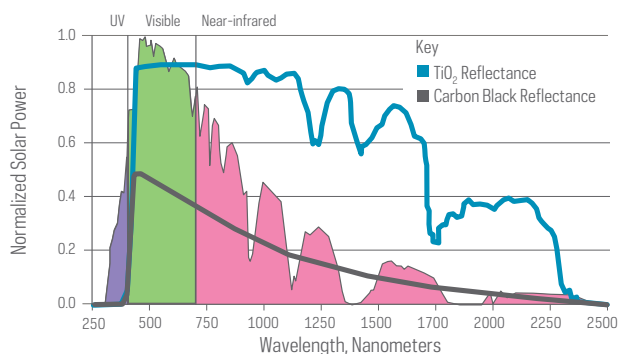
Ti-Pure™ R-960 is designed with neutral undertone and tint strength to support color development while providing UV protection.

Figure 3. Enabling Reduced Color Pigment Consumption



Ti-Pure™ R-960 allows desired color and opacity at lower color pigment consumption.

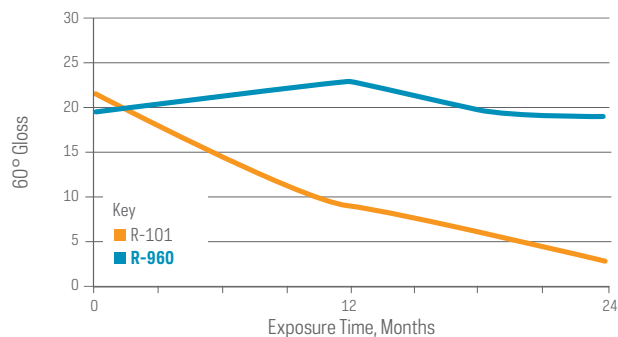
Figure 4. Solar Reflectance of TiO₂



IR Reflectance/Heat Absorption as proof point. (Geert/Adam/Phil/Mike D)

Strong reflectivity of TiO₂ in near IR region is responsible for its success as a solar reflective filler.

Figure 5. Gloss Retention of PVC, Florida Exposure 45° South



Ti-Pure™ R-960 provides durability by preventing polymer photodegradation catalyzed polymer degradation by interrupting the chain of reactions that cause failure.

For more information, visit tipure.com

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