

# Grade Snapshot

# **Product Information**

# **Product Description**

Ti-Pure<sup>™</sup> R-706 is a rutile titanium dioxide pigment, manufactured by the chloride process and is delivered as a fine, dry powder. Ti-Pure<sup>™</sup> R-706 delivers flexibility and reliability in interior and exterior coatings applications requiring excellent tinting strength and durability, high gloss, and where appearance is critical.

Ti-Pure<sup>™</sup> R-706 is designed with both alumina and silica surface treatments to enhance dispersibility and durability. Careful control of the TiO<sub>2</sub> particle size during manufacturing results in higher tint strength, more consistent performance in applications, and less oversized particles that detract from gloss.

Ti-Pure<sup>™</sup> R-706 is available in 25 kg bags and semi-bulk containers (½ and 1 metric ton).

## **Key Benefits**

- Tight particle size control for superb tinting strength, product consistency, and color matching
- Blue undertone for maximum flexibility in formulated color space and brighter, cleaner colors in tinted systems
- Balance of optical and weathering properties for
  reliability and flexibility in high-performance applications
- Enhanced durability for superior gloss retention so coatings look new longer
- Silica treatment for better film cure in acid catalyzed coatings

## Suggestions For Use

Ti-Pure<sup>™</sup> R-706 is frequently found in Gloss and Semigloss architectural paints; Wood coatings; Refinish and original equipment manufacturer (OEM vehicle) topcoat





applications that demand high gloss, distinctness of image, and weather resistance; Coil coatings. This grade is produced globally in multiple manufacturing sites which ensures supply reliability.

#### Architectural Paints

Ti-Pure<sup>™</sup> R-706 is the best choice for multiple architectural formulations and delivers unsurpassed performance in interior and exterior architectural paints. The blue undertone, high durability, superb tinting strength, and exceptional dispersibility and consistency are well suited for automated tinting systems where color matching is critical.

#### Industrial Coatings

Ti-Pure<sup>™</sup> R-706 has delivered exceptionally durable TiO<sub>2</sub> performance for almost 30 years and is backed by decades of rigorous testing including outdoor exposure studies. This history of performance makes it an ideal solution for industrial applications where service lifetimes can be up to 20 years or more. Ti-Pure<sup>™</sup> R-706 can be trusted to deliver optimal performance in Automotive OEM coatings and other industrial applications due to its superb tinting strength and product consistency.

#### **Table 1. Physical Properties**

Property	Ti-Pure <sup>™</sup> R-706
TiO <sub>2</sub> , wt%, min.	93
Alumina, wt%	2.5
Amorphous Silica, wt%	3.0
Specific Gravity	4.0
Bulking Value, L/kg (gal/lb)	0.25 (0.03)
Organic Treatment	Yes
Color CIE L*	99.4
Median Particle Size, µm	0.36
Oil Absorption	13.9
рН	8.2
Resistance at 30 °C (86 °F) (1,000 ohm)	10
Carbon Black Undertone	13.8

Note: All values are typical unless otherwise specified.

#### Figure 1. Average of Dispersion Hegman Scats



The outstanding dispersability of Ti-Pure<sup>™</sup> R-706 provides coatings manufacturers with ease of handling at production stages, and higher final product consistency that will maximize productivity and quality.



#### Figure 2. Tint Strength versus Dry Pigment b\*

Ti-Pure  $^{\rm m}$  R-706 has high tinting strength and blue undertone for brighter, cleaner colors.

#### Figure 3. Months to Failure — Florida



Ti-Pure<sup>™</sup> R-706 provides coatings with very good exterior durability; the above chart shows the chalk-fade performance of paints formulated with different TiO<sub>2</sub> pigments; the top layer indicates the panel's original tone, whereas the rest of the panel indicates the durability of the paint (the darker the better). Images taken at 1 year with South Florida exposure show R-706 provides better retention.

#### Figure 4. Emulsion Gloss and Chalk Fade



Ti-Pure<sup>™</sup> R-706 has a combination of high initial gloss and low chalk fade allowing for excellent appearance that lasts longer.

#### For more information, visit tipure.com

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