



# Ti-Pure™

R-105 Titanium Dioxide

## Specifically Designed for Exterior Plastic Applications

When extended service  
life is required

**The Great Outdoors...** Powerful ultraviolet rays from the sun constantly bombard the earth. Left unprotected, window shutters, roofing materials, architectural décor, leisure furniture, plastic agricultural storage bags, or other polyolefin outdoor products will crack, blister, or fade in the sun. The initial color, gloss, beauty, and strength of the products are lost over time.

Exterior applications demand ultimate durability to protect against the ravages of nature’s elements. It is a tough challenge to find the salient ingredient to lasting beauty and superior weatherability.

Rutile titanium dioxide can provide maximum protection for extended outdoor service life. However, not all grades of TiO<sub>2</sub> are created equal.

For durable polyolefin applications, Ti-Pure™ R-105 has the perfect combination of weatherability, optics, and processibility to meet the most exacting requirements.

**Ti-Pure™ R-105 titanium dioxide has been specifically designed to achieve:**

- Maximum weather resistance
- Bright, neutral whites
- Color formulation flexibility
- Superior processibility

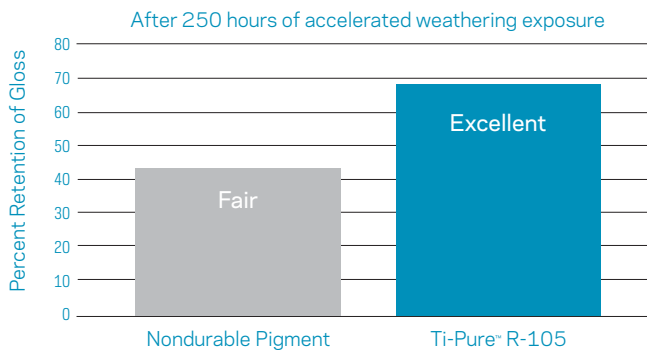


Ti-Pure™ R-105—for roofing membrane



**Figure 1:**

Gloss Retention in Polypropylene Chips with 5% TiO<sub>2</sub>



Ti-Pure™ R-105 titanium dioxide was developed from over 50 years of experience in durable exterior applications providing exceptional performance.

### Exceptional Durability

- UV energy is absorbed and dissipated by the fine sized particles of Ti-Pure™ R-105. Innovative silica encapsulation technology is used to impart a chemically inert coating on each  $\text{TiO}_2$  particle to prevent microcracks, chalking, or other degradation of the plastic.
- Ti-Pure™ R-105 improves the efficiency of UV stabilizers.
- High gloss retention — polyolefin parts look and perform like new, longer.

### Pin-point Color

- With the unique combination of a neutral undertone, excellent opacity, and strong brightness, Ti-Pure™ R-105 is the easy solution for matching color tints or delivering bright, clean whites.

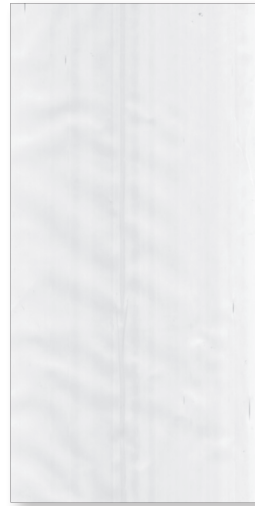
### Low Volatility

- At elevated temperatures, general grades of titanium dioxide can “de-volatilize,” creating downstream quality issues like holes or other imperfections, particularly in thin film applications. To compensate, most users end up slowing down their process.
- Ti-Pure™ R-105 resists “lacing” or “de-volatilization” and in the process, allows users to run faster.

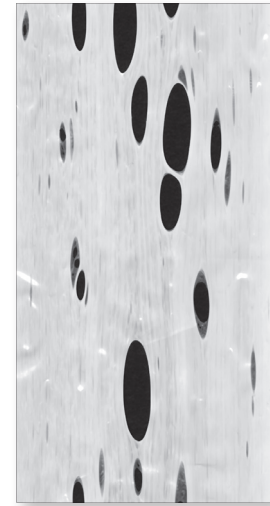
### Excellent Dispersibility

- Ti-Pure™ R-105 flows easily and disperses readily into a variety of resins, insuring consistently and reliably, high quality products.
- Its optimized surface chemistry enhances bulk flow and improves processing..

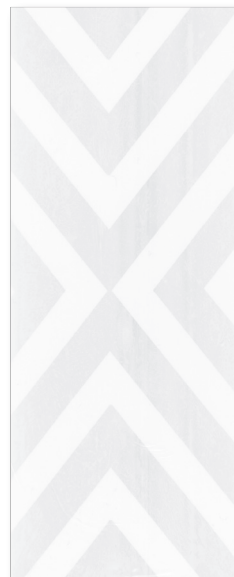
**Figure 2:**  
Pigment Comparison



Ti-Pure™ R-105



Premier Durable Pigment



Ti-Pure™ R-105



Premier Durable Pigment



Ti-Pure™ R-105



Premier Durable Pigment

**Ti-Pure™ R-105 — Request Your Sample Today!**

Ti-Pure™ R-105 titanium dioxide — For the variety of durable plastic applications, there is a clear pigment choice that delivers superior results every time — Ti-Pure™ R-105. 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.

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For more information, visit [www.titanium.chemours.com](http://www.titanium.chemours.com)

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