When extended service life is vital

Consistent color, superior weathering and processibility are critical... to a fence manufacturer, and the choice of TiO$_2$ plays a decisive role.

Consistency of color makes it easier for a manufacturer to match color and control shade on a day-to-day basis.
Ti-Pure™ offers consistent color performance, whether a manufacturer desires a blue undertone of white (Ti-Pure™ R-103 in Figure 1), a neutral undertone (Ti-Pure™ R-105 in Figure 2) or a creamy shade of white for colored fencing (Ti-Pure™ R-960 in Figure 3).

Discoloration resistance or non-yellowing is vital for long-term durability. All Ti-Pure™ grades are designed to deliver exceptional durability, whether your preference is a chalking grade such as Ti-Pure™ R-103 or a non-chalking grade such as Ti-Pure™ R-105/R-960 (Graph 1 on page 3).

Retention of original gloss helps toward the ‘looks new longer’ that consumers rate highly.* The non-chalking grades by Ti-Pure™ both ‘shine’ in this regard (Graph 2 on page 3).

**Figure: 1**
Ti-Pure™ R-103 for chalking
- Ti-Pure™ R-103 — for UV protection through chalking.
- Chalking forms a top layer enriched in TiO₂ to provide that fresh white look!

**Figure: 2**
Ti-Pure™ R-105 for clean bright and white gloss
- Ti-Pure™ R-105 — for UV protection while retaining gloss and whiteness to keep your fence looking shiny and new!

**Figure: 3**
Ti-Pure™ R-960 for color retention
- Ti-Pure™ R-960 — for colored fencing.
- Ti-Pure™ R-960 — provides excellent color retention and UV durability while at the same time requiring less colorant!

*Vinyl Fence Survey, Decision Analyst Study #2004-0307 for Chemours, June 2004
Although not inherently an easy material to handle and transport, the surface treatment of TiO$_2$ can make a significant improvement to the bulk handling of TiO$_2$. Ti-Pure™ R-105 is the clear winner in this arena and may also provide a processing rate advantage for the manufacturer.

QUV exposure for 1,000–2,500 hours is commonly used in the Fence industry to evaluate long-term UV exposure effects. The graphs below were generated after 2,500 hours in a QUV weathering chamber.

**Graph 1:** Delta E after 2,500 hr in QUV

![Graph 1: Delta E after 2,500 hr in QUV](image)

**Graph 2:** Gloss Retention after 2,500 hr in QUV

![Graph 2: Gloss Retention after 2,500 hr in QUV](image)

**Table 1:** Grades — Depending on your optical and performance needs, select the grade from the table that best suits your applications.

<table>
<thead>
<tr>
<th>Non-Chalking Grades</th>
<th>Chalking Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ti-Pure™ R-105</td>
<td>Ti-Pure™ R-103</td>
</tr>
<tr>
<td>Ti-Pure™ R-960</td>
<td>Ti-Pure™ R-960</td>
</tr>
<tr>
<td>Ti-Pure™ R-105</td>
<td>Ti-Pure™ R-105</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Ti-Pure™ R-105</th>
<th>Ti-Pure™ R-960</th>
<th>Ti-Pure™ R-103</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durability (discoloration resistance)</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Good</td>
</tr>
<tr>
<td>Undertone</td>
<td>Bluer</td>
<td>Yellower</td>
<td>Bluer</td>
</tr>
<tr>
<td>Bulk Flow</td>
<td>Excellent</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>Tint Strength</td>
<td>High</td>
<td>Low</td>
<td>High</td>
</tr>
</tbody>
</table>
Request Your Sample Today!

When extended service life is required, select from a variety of durable outdoor vinyl grades, Ti-Pure™ R-103 for chalking, Ti-Pure™ R-105 for clean bright and white gloss, Ti-Pure™ R-960 for color retention. Either choice delivers superior results every time. Ti-Pure™ grades R-103 and R-105 are available in specially packaged 25 kg polyethylene bags to eliminate fiber contamination from paper bags. R-960 is supplied in paper 25 kg bags. R-103, R-105 and R-960 are all also available in metric tonne flexible intermediate bulk containers. If you need additional information or would like to request a sample, please visit our website or contact your local representative.