



# Ti-Pure™

## R-101 Titanium Dioxide

## Product Information

### Product Description

Ti-Pure™ R-101 is a rutile titanium dioxide pigment manufactured by the chloride process. It is excellent for high-temperature plastics applications requiring outstanding dispersibility and lowest possible volatility. The grade is a fine, dry, white powder with the following general properties.

**Table 1. Physical Properties**

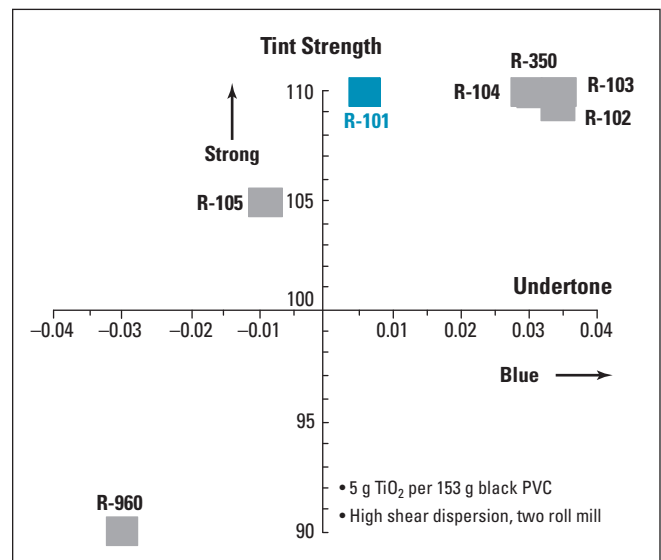
|   |      |
|---|------|
| Titanium Dioxide, wt%, min.                 | 97   |
| Alumina, wt%, max.                          | 1.7  |
| Organic Treatment, wt%, carbon              | 0.2  |
| Specific Gravity                            | 4.2  |
| Mean Particle Size, $\mu\text{m}$           | 0.29 |
| pH (aqueous slurry)                         | 8.5  |
| Resistance (aqueous slurry), k ohm-cm, min. | 2    |

### Suggestions for Use

Ti-Pure™ R-101 is designed primarily for plastic applications. Ti-Pure™ R-101 provides high opacity with a neutral undertone (**Figure 1**).

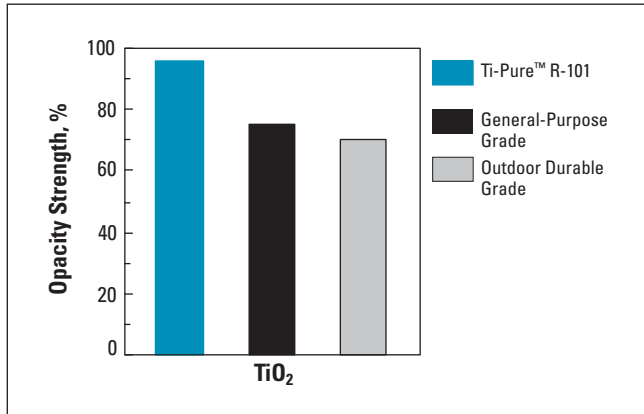
The low level of surface treatment on Ti-Pure™ R-101 gives it excellent dry blend dispersion. **Figure 2** demonstrates relative opacity strength of pigments for simple tumble blending versus high shear dispersion.

**Figure 1. Optical Properties**



**Table 2. General Properties**

|                             |                             |
|-----------------------------|-----------------------------|
| Opacity Strength            | High                        |
| Undertone Tint              | Neutral                     |
| Dispersibility in:          |                             |
| Plasticized Vinyl           | Good                        |
| Plasticizers                | Fair                        |
| Dry Blending Operations     | Excellent                   |
| Effect on Melt Flow         | Minimal                     |
| Melt Compounding Operations | Excellent                   |
| Weathering Resistance       | "Chalking" Grade in PVC Use |

**Figure 2. Dry Blend Dispersion Performance**

A major advantage of Ti-Pure™ R-101 is its low level of crystalline and surface adsorbed water. This characteristic gives superior performance in high-temperature polyolefin extrusion coating operations sensitive to lacing. The very low volatility of Ti-Pure™ R-101 is reflected in **Figures 3** and **4**.

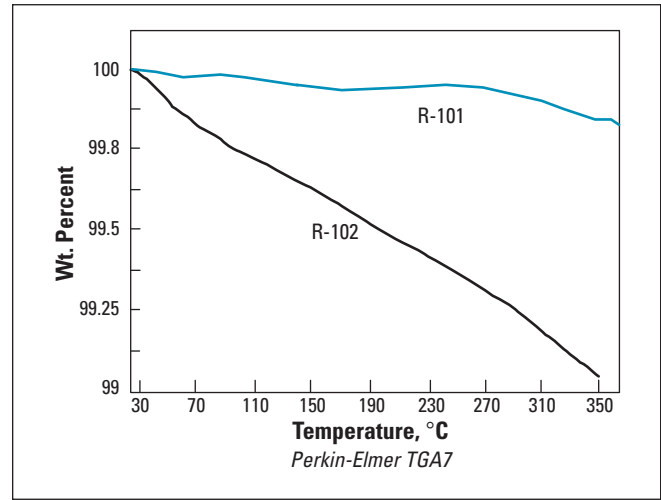
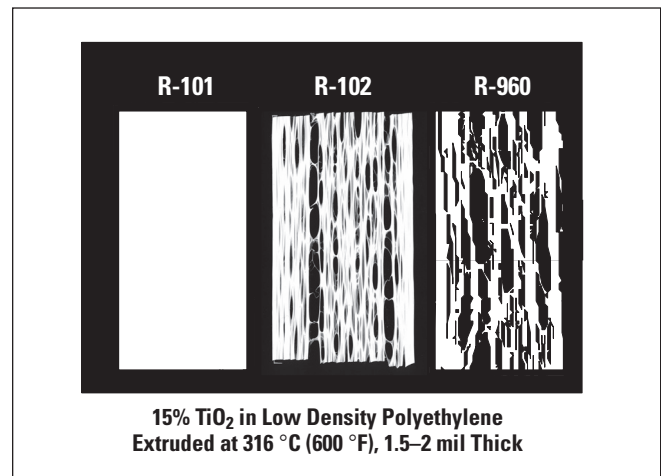
#### Shipping Containers

Ti-Pure™ R-101 rutile titanium dioxide is available in two recyclable package types:

- 25 kg polyethylene bags
- 2,000 lb (907 kg) flexible intermediate bulk containers

Ti-Pure™ R-101 is listed with NSF International for use in plastic pipe products.

For further information about this grade or to request a sample, please see the Ti-Pure™ web site.

**Figure 3. Thermogravimetric Measurement of TiO<sub>2</sub> Volatility****Figure 4. Ti-Pure™ Titanium Dioxide Lacing Resistance**

**CAUTION:** Do not use Chemours materials in medical applications involving permanent implantation in the human body or contact with bodily fluids or tissues, unless the material has been provided from Chemours under a written contract that is consistent with Chemours policy regarding medical applications and expressly acknowledges the contemplated use. For further information, please contact your Chemours representative. You may also visit [www.teflon.com/industrial](http://www.teflon.com/industrial) to download a copy of the "Chemours POLICY Regarding Medical Applications" C-00000 and "Chemours CAUTION Regarding Medical Applications" C-00000. For medical emergencies, spills, or other critical situations, call (800) 441-7515 within the United States. For those outside of the United States, call (302) 774-1000.

The information set forth herein is furnished free of charge and based on technical data that Chemours believes to be reliable. It is intended for use by persons having technical skill, at their own discretion and risk. The handling precaution information contained herein is given with the understanding that those using it will satisfy themselves that their particular conditions of use present no health or safety hazards. Because conditions of product use are outside our control, Chemours makes no warranties, express or implied, and assumes no liability in connection with any use of this information. As with any material, evaluation of any compound under end-use conditions prior to specification is essential. Nothing herein is to be taken as a license to operate under or a recommendation to infringe any patents.

NO PART OF THIS MATERIAL MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM OR TRANSMITTED IN ANY FORM OR BY ANY MEANS ELECTRONIC, MECHANICAL, PHOTOCOPYING, RECORDING OR OTHERWISE WITHOUT THE PRIOR WRITTEN PERMISSION OF CHEMOURS.

---

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

© 2015 The Chemours Company TT, LLC. Ti-Pure™ and any associated logos are trademarks or copyrights of The Chemours Company TT, LLC.  
Chemours™ and the Chemours Logo are trademarks of The Chemours Company

Replaces H-52216-6  
C-10424 (7/15)