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, µm	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

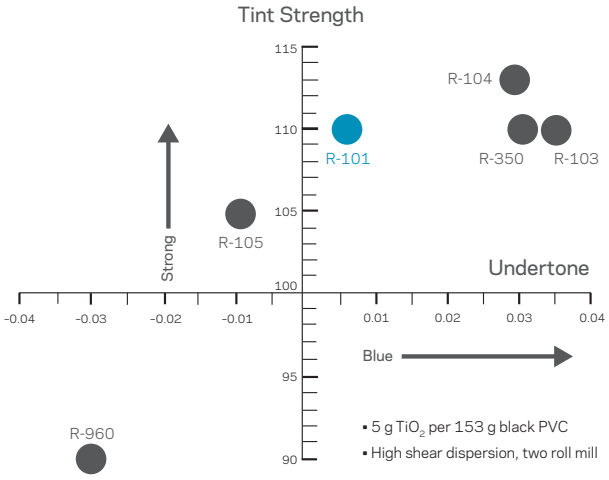
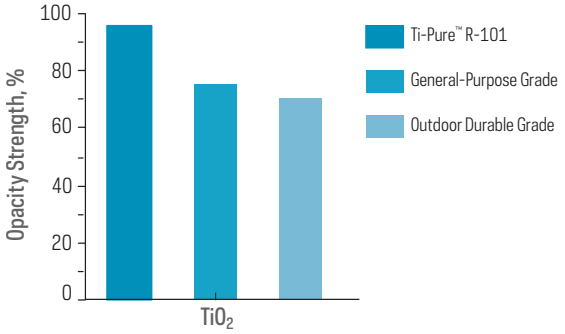


Table 2. General Properties

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

Chemours™

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_2 Volatility

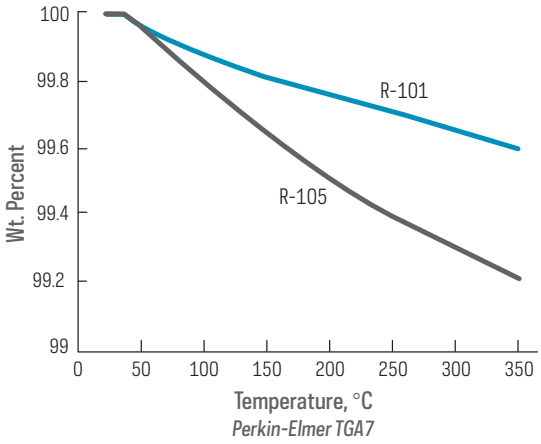
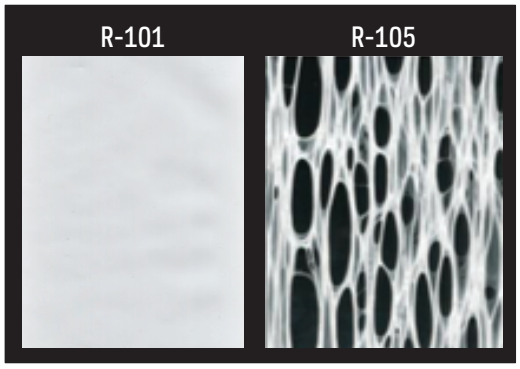


Figure 4. Ti-Pure™Titanium Dioxide Lacing Resistance



15% TiO_2 in Low Density Polyethylene
Extruded at 316 °C (600 °F), 1.5–2 mil Thick

For more information, visit tipure.com

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