# Ti-Pure™

## TS-1510 Titanium Dioxide

# Product Information

### Product Description

Ti-Pure™ TS-1510 is a highly efficient rutile titanium dioxide pigment manufactured with a revolutionary processing technology. Ti-Pure™ TS-1510 was designed to significantly enhance the level of processing efficiency in plastics applications including POMB. Ti-Pure™ TS-1510 provides improved flowability, line productivity, energy, and labor efficiencies along with low-dusting that promotes safer handling and material efficiency. It is excellent for high temperature plastics applications requiring outstanding dispersibility and lowest possible volatility. The grade has 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™ TS-1510 is designed primarily for plastic applications. Ti-Pure™ TS-1510 provides high opacity with a neutral undertone (**Figure 1**).

**Product Sustainability Designations:**

Climate Impact

Resource Efficiency

**Figure 1.** Optical Properties

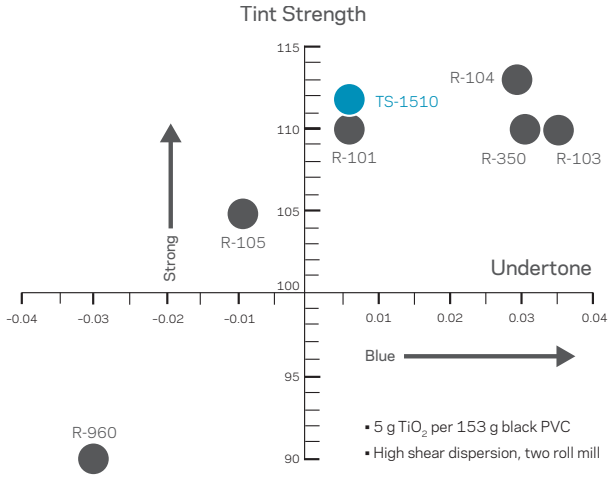


**Table 2.** General Properties

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

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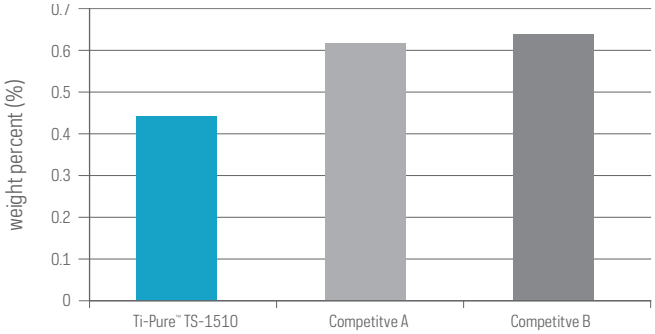
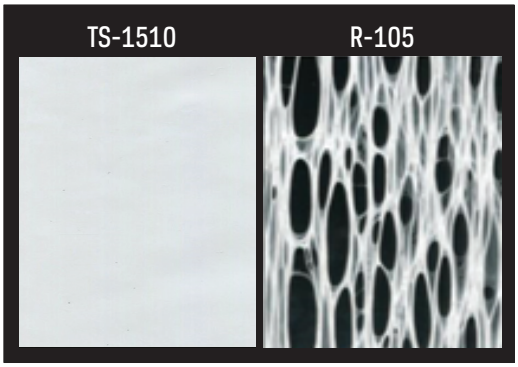
Ti-Pure™ TS-1510 has a low level of crystalline and surface adsorbed water and gives superior performance in high temperature polyolefin extrusion coating operations sensitive to lacing. **Figures 2** and **3**.

**Figure 2.** Ti-Pure™ TS-1510 Enables Higher Processing Temperatures



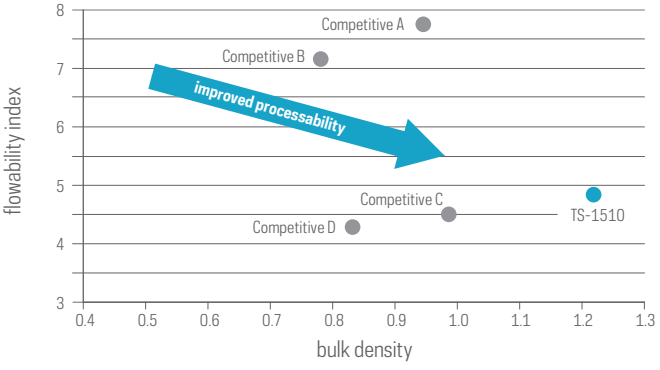

Thermogravimetric measurement of $TiO_2$ volatility

**Figure 3.** Ti-Pure™ TS-1510 Lacing Resistance Enables Thinner Films and Material Efficiency



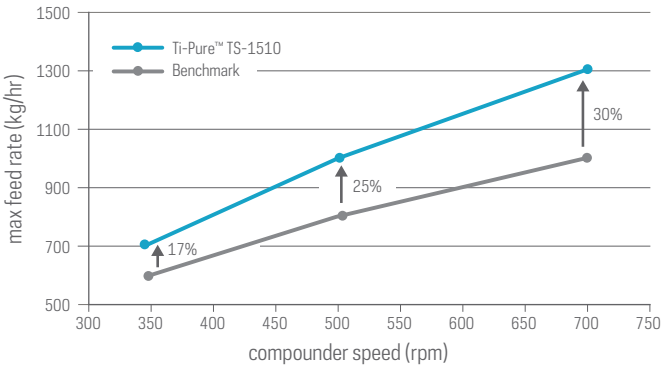

15% $TiO_2$ in Low Density Polyethylene
Extruded at 316 °C (600 °F), 1.5–2 mil Thick

**Figure 4.** Ti-Pure™ TS-1510 Material Properties Unlock Processing Improvements




Simultaneous improvements in bulk density and flowability enable step change in processing performance

**Figure 5.** Ti-Pure™ TS-1510 for up to 30% Increase in Processing Rate




*Generated on a Farrel Continuous Mixer model CP550

## Shipping Containers

Ti-Pure™ TS-1510 has a more efficient and smaller package that reduces required warehouse and line storage space. **Figure 6.**

Ti-Pure™ TS-1510 rutile titanium dioxide is available in a recyclable package:

- 2,000 lb (907 kg) flexible intermediate bulk containers.

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

**Figure 6.** 50% Reduction in Package Height for more Efficient Storage

For more information, visit www.tipure.com

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