

DuPont™ Ti-Pure® R-102

TITANIUM DIOXIDE

Product Description

DuPont™ Ti-Pure® R-102 is a rutile titanium dioxide pigment manufactured by the chloride process. It is an excellent general-purpose grade for plastics applications, combining high opacity strength and very blue undertone tint with a low level of surface treatment to enhance conveyability and flocculation resistance. Ti-Pure® R-102 is a fine, dry, white powder with the following general properties.

Table 1
Physical Properties

Titanium Dioxide, wt%, min.	96
Alumina, wt%, max.	3.2
Organic Treatment, wt%, carbon	0.2
Specific Gravity	4.1
pH (aqueous slurry)	7.5
Resistance (aqueous slurry), k ohm-cm, min.	2

Suggestions for Use

Ti-Pure® R-102 surface treatment provides enhanced dry flow conveyability and excellent performance in liquid systems such as plastisols, liquid colorants, etc. Ti-Pure® R-102 surface treatment provides liquid viscosity stability comparable to grades designed for paint applications (**Figure 2**), while possessing the blue tint valued in plastic products (**Figure 1**). Coupled with its ease of dispersion into liquid systems, Ti-Pure® R-102 is an excellent choice for liquid color concentrates, flexible PVC, and PVC plastisol applications.

Figure 1. Optical Properties

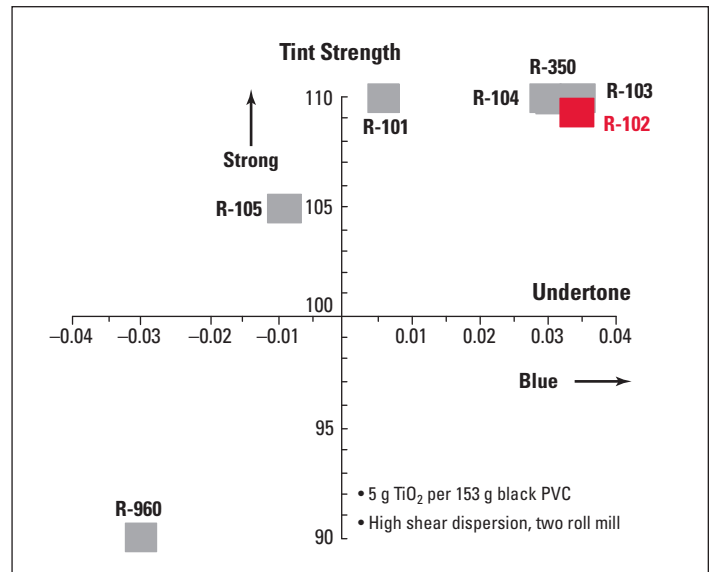


Table 2
General Properties

Opacity Strength	High
Undertone Tint	Very Blue
Dispersibility in:	
Plasticized Vinyl	Excellent
Plasticizers	Excellent
Dry Blending Operations	Good
Melt Compounding Operations	Excellent*
Weathering Resistance	"Chalking" Grade in PVC Use

Figure 2. Plastisol Storage Stability (70 wt% TiO₂ in DIDP)

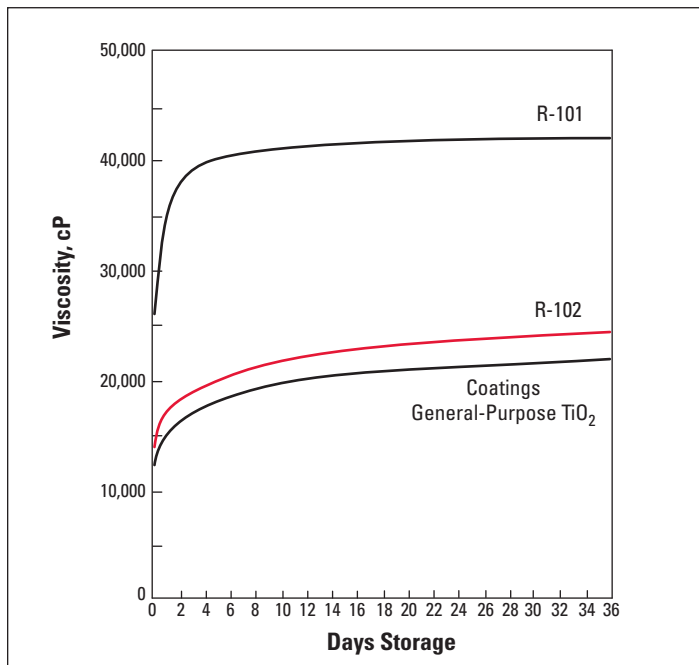


Figure 3. Thermogravimetric Measurement of TiO₂ Volatility

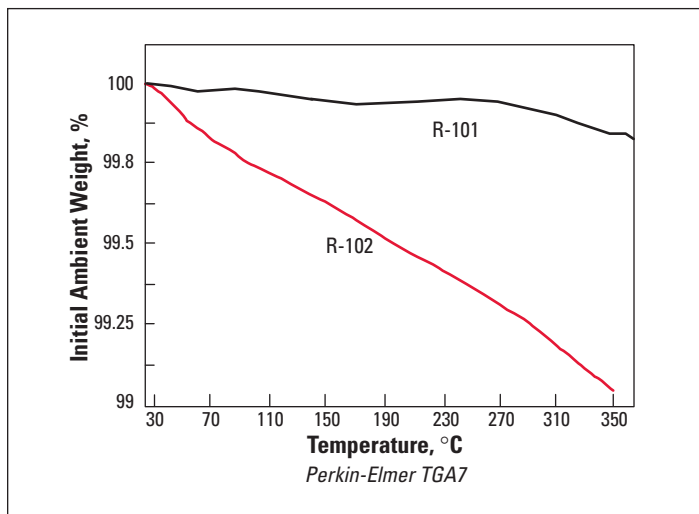
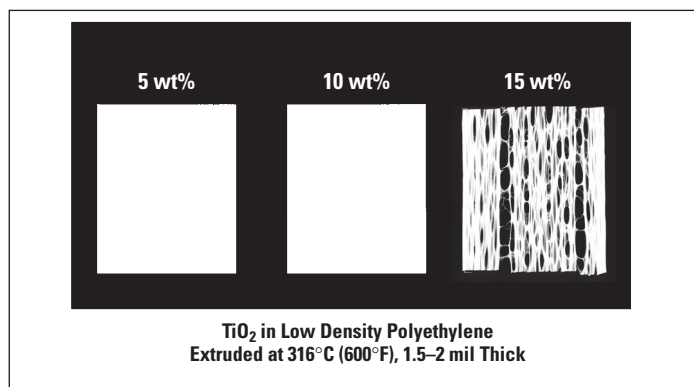


Figure 4. Ti-Pure® Dioxide R-102 (Lacing Resistance versus Pigment Loading)



The volatility of Ti-Pure® R-102 allows acceptable processing in all applications, except high temperature thin PE cast film or PE extrusion coating (Figures 3 and 4). For these demanding applications, Ti-Pure® R-101, R-104, or R-350 grades are recommended.



Ti-Pure® R-102 is listed with NSF International for alternate use in NSF International plastic pipe products.

Shipping Containers

Ti-Pure® R-102 rutile titanium dioxide is available in two recyclable package types to meet your needs:

- 25 kg polyethylene bags
- 1 metric ton (1,000 kg) flexible intermediate bulk containers

For further information about this grade or to request a sample, please see the DuPont Titanium Technologies web site.

www.titanium.dupont.com

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