

DuPont™ Ti-Pure®

TITANIUM DIOXIDE

APPLICATION GUIDE FOR PLASTIC END USES

Finished Product	Grade						
	R-101	R-102	R-103	R-104	R-105*	R-350	R-960*
Polyethylene/Polypropylene							
Injection Molding	●	●	●	●		◆	
Blow Molding	●	●	●	●		◆	
Blown Film	●	●	●	●		◆	
Cast Film	●	●	●	●		◆	
High-Temperature Cast Film or Extrusion Coating	◆			◆		◆	
Exterior, Durable*					◆		●
Liquid Colorants		◆	●				
PVC							
Interior, Rigid	●	◆	●	●			
Exterior, Chalking	●	◆	●	●			
Exterior, Nonchalking					◆		◆
Flexible	●	◆	●		●		
Plastisol		◆	●		●		●
Lead-Stabilized Systems			●		◆		●
Pipe**	●	◆	●	●			
ABS		●	●	●		◆	●
Polystyrene	●	●	◆	◆			●
Polycarbonate	For Polycarbonate we recommend PCx01 or PCx02***						
Polyamide	●	●	●	●			●
Polyester	For Polyester we recommend PETx***						
Thermoset (PES)	●	●	●	●			●

- ◆ Preferred grade for application
- Grade fully usable for application

* Grades R-105 and R-960 are maximum durability grades and recommended for all applications that require extended outdoor service life.

** Grades R-101, R-102, R-103, R-104, R-700, and R-900 are listed with the NSF International for plastic pipe use.

***For information on these products consult your local sales representative.



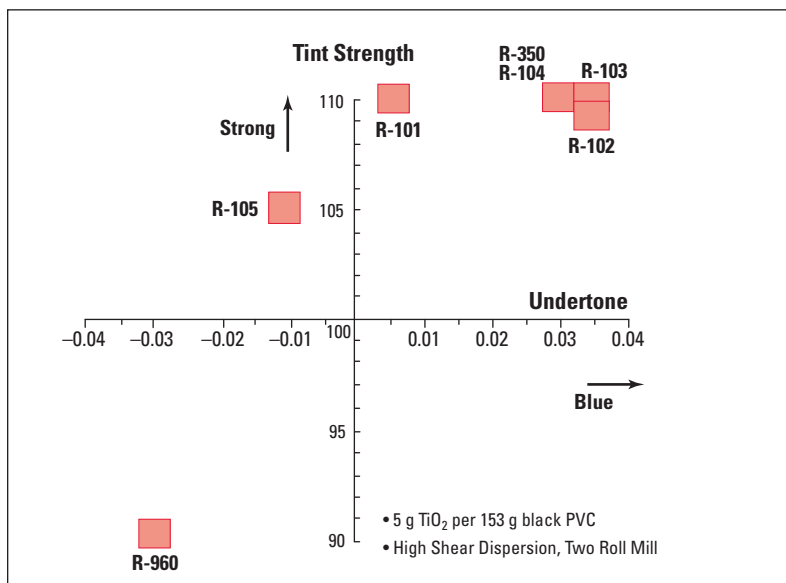
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Plastics Grades TiO₂ Physical Properties

Property	Grade						
	R-101	R-102	R-103	R-104	R-105	R-350	R-960
TiO ₂ , wt%, min.	97	96	96	97	92	95	89
Alumina, wt%, max.	1.7	3.2	3.2	1.7	3.2	1.7	3.5
Silica, wt%, max.	N/A	N/A	N/A	N/A	3.5	3.0	6.5
Organic Treatment	hydrophilic	hydrophilic	hydrophilic	hydrophobic	hydrophobic	hydrophobic	N/A
Color CIE L*, min.	97.9	98.5	97.8	97.5	98.5	98.5	98.5
Specific Gravity	4.2	4.1	4.1	4.2	4.0	4.1	3.9
Vinyl Tint Strength	102/110	109	110	110	105	110	90
Vinyl Undertone	-0.040/0.005	0.035	0.035	0.030	-0.010	0.030	-0.030
pH	8.0/8.5	7.5	6.5	N/A	N/A	N/A	7.4
Resistance, min.	2.0	2.0	4.0	N/A	N/A	N/A	4.0

Notes: Unless noted, values are typical. Resistance is reported as the minimum value in k ohm-cm. Test methods used to determine the values reported are available from your TiO₂ sales or technical service representative.

Figure 1. Titanium Dioxide Plastics Optical Properties



DuPont Titanium Technologies

www.titanium.dupont.com

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