



Ti-Pure™
Titanium Dioxide

Application Guide for Plastic End Uses

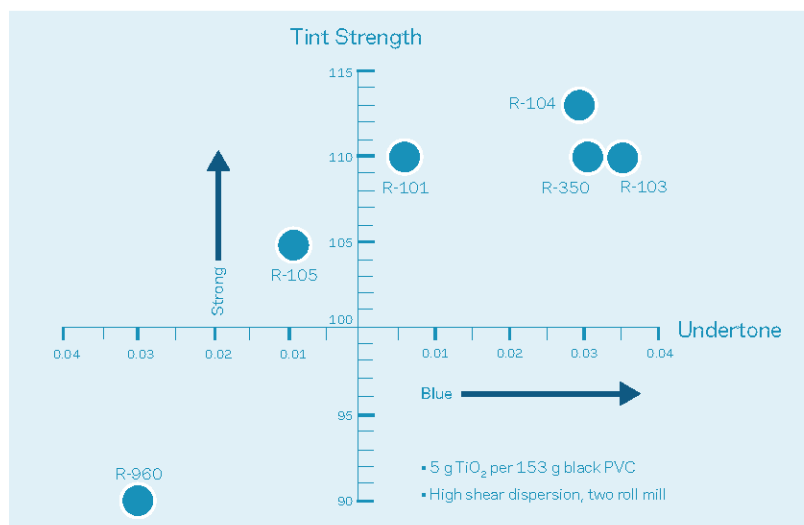
	General	Critical Dispersion	Discoloration Resistant	Photo-durable (Exterior Application)
Polyolefins (PE, PP, TPO, etc.)				
Rigid (injection/ blow molded)	R-103		R-103	R-103
Film/Sheet	R-104	R-350	R-350	R-105
Polyvinyl Chloride (PVC)				
White, chalking profiles	R-103			
White, non-chalking profiles	R-105			
Colored, non-chalking profiles	R-960			
Film/sheet	R-104	R-350	R-350	R-105
Acrylonitrile Butadiene Styrene (ABS)	R-350			R-105
Polyethylene Terephthalate (PET)	R-104			
Polystyrene (PS)	R-104			
Polyamide (PA)	R-103			
Polyesters	R-104			
Polyethersulfone (PES)	R-960			
Thermoset	R-960			
Bio Plastics				
PolyLacticAcid (PLA)	R-104			
Bio Polyolefins	See recommendations for Polyolefins above			

Plastics Grades TiO₂ Physical Properties

Property	Grade					
	R-101	R-103	R-104	R-105	R-350	R-960
TiO ₂ , wt%, min.	97	96	97	92	95	89
Alumina, wt%, max.	1.7	3.2	1.7	3.3	1.7	4.0
Silica, wt%, max.	N/A	N/A	N/A	3.5	3.0	6.5
Organic Treatment	hydrophilic	hydrophilic	hydrophobic	hydrophobic	hydrophobic	N/A
Color CIE L*, min.	97.9	97.8	97.5	98.5	98.5	98.5
Specific Gravity	4.2	4.1	4.2	4.0	4.1	3.9
Median Particle Size, μm	0.29	0.22	0.22	0.31	0.22	0.35
Vinyl Tint Strength	110	110	113	104	110	90
Vinyl Undertone	0.005	0.035	0.030	-0.010	0.030	-0.030
pH	8.5	6.5	N/A	N/A	N/A	7.4
Resistance, min.	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



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