

Ti-Pure™ Grade Selection Guide for Plastics

Grade	R-101	R-103	R-104	R-105	R-350	R-960	TS-1510
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Polymer System and Application

Polymer System and Application	R-101	R-103	R-104	R-105	R-350	R-960	TS-1510
Polyethylene/Polypropylene							
Compounding	●	●	◆	●	◆		◆
Injection Molding	●	◆	◆		●		●
Blow Molding	●	◆	◆		●		●
Blown Film	●	●	◆		◆		●
Extruded Sheet	●	●	●		◆		●
High-Temperature Cast Film or Extrusion Coating	●		◆		●		●
Exterior, Semi-durable		●			◆		
Exterior, Durable				◆		●	
Liquid Colorants		◆	●			●	
PVC							
Interior, Rigid	●	●	●		◆		●
Exterior, Chalking	◆	●					◆
Exterior, Non-chalking				◆	●	◆	
Flexible, Durable		●		◆	●	◆	
Plastisol		◆	●	●		●	
Lead-Stabilized Systems		●		◆		●	
Pipe	●	◆		●			●
ABS							
Polystyrene	●	●	◆		●	●	●
Polycarbonate			●		●		
Polyamide	●	●	◆	●			●
Polyester	◆	●	◆	●			◆
Biodegradable/Compostable			◆		◆		
Thermoset (PES)	●	◆	●			●	●

◆ Highly Recommended ● Grade Suitable for Application

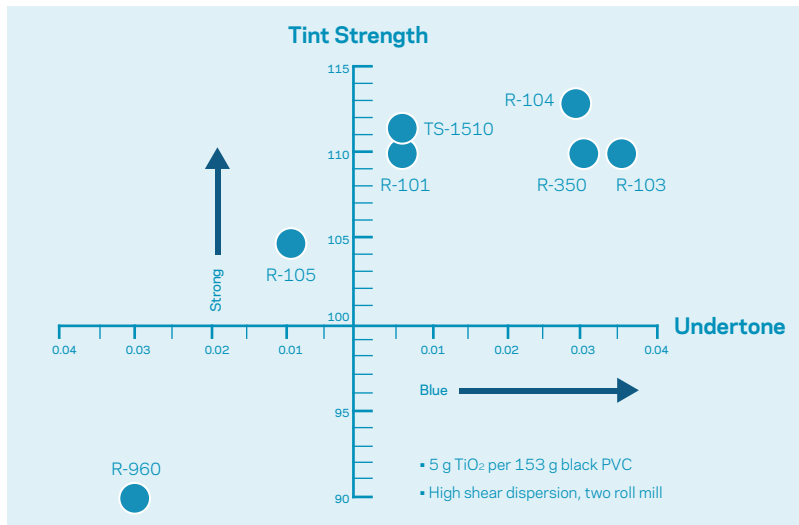
1. For regulatory statements and voluntary certifications (food contact, NSF and others) please go to www.tipure.com/en/support/regulatory

Plastics Grades TiO₂ Physical Properties

Grade	R-101	R-103	R-104	R-105	R-350	R-960	TS-1510
Property							
TiO ₂ wt%, min.	97	96	97	92	95	89	97
Alumina, wt%, max.	1.7	3.2	1.7	3.3	1.7	4.0	1.7
Silica, wt%, max.	N/A	N/A	N/A	3.5	3.0	6.5	N/A
Organic Treatment	hydrophilic	hydrophilic	hydrophobic	hydrophobic	hydrophobic	N/A	hydrophilic
Color CIE L*, min.	97.9	97.8	97.5	98.5	98.5	98.5	97.9
Specific Gravity	4.2	4.1	4.2	4.0	4.1	3.9	4.2
Median Particle Size, μm	0.29	0.22	0.22	0.31	0.22	0.35	0.29
Vinyl Tint Strength	110	110	113	104	110	90	112
Vinyl Undertone	0.005	0.035	0.030	-0.010	0.030	-0.030	0.005
pH	8.5	6.5	N/A	N/A	N/A	7.4	8.5
Resistance, min.	2.0	4.0	N/A	N/A	N/A	4.0	2.0

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

Figure 1. Titanium Dioxide Plastics Optical Properties



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