

**15% Highly Filled Carbon Nanotube Filled Polycarbonate
Masterbatch**
6002
PRODUCT DESCRIPTION

15% active carbon nanotubes dispersed in a Polycarbonate (PC) resin matrix suitable for twin screw extrusion masterbatch letdown applications. Alternative description: PR00551.

GENERAL INFORMATION

Resin	Polycarbonate
Filler	Carbon Nanotubes
Fill level	15%
Uses	Letdowns
Form	Pellets

PHYSICAL PROPERTIES	Typical Value Range	Units	Method
Specific Gravity	1.17 - 1.23	N/A	ASTM D792
Moisture Content	< 1	%	ASTM D6980
Pellet Count	5.0 - 6.0	g/100 pellets	

STORAGE, SHELF LIFE, PROCESSING LIMITATIONS, AND PACKAGING

Keep in the original container or an approved alternative made from a compatible material with desiccant, kept tightly closed when not in use and out of direct sunlight. Dry material at 120 °C for 2-4 hours prior to compounding if needed. Reseal bag after use. Product is shelf stable for at least 1 year and must be processed under 330 °C. Compatible with PC like resins. Product is available in 150 pound drums and 1000 pound gaylords.

MASTERBATCH PERFORMANCE

Testing is performed on ASTM standard injection molded tensile and flexural bars made from the appropriate letdown ratios into PC via twin screw extrusion.

<u>Active Carbon Nanotube Weight %</u>	<u>0%</u>	<u>1%</u>	<u>2%</u>	<u>3%</u>	<u>4%</u>	<u>5%</u>	<u>Units</u>	<u>Method</u>
<u>Tensile</u>								ASTM D638
Modulus	317505	349186	365423	385529	420795	459648	psi	
Strength	8993	8011	8572	8472	8528	5340	psi	
Elongation @ Break	39.3	9.3	5.0	3.4	3.3	1.3	%	
<u>Flexural</u>								ASTM D790
Modulus	348128	344265	366953	388644	404375	424279	psi	
Strength	12790	12874	13370	14037	14286	12312	psi	
<u>Impact (IZOD)</u>								ASTM D256 & ASTM D4812
Unnotched	16.4	6.6	9.1	6.2	5.8	5.1	ft-lbf/in	
Notched	1.51	1.05	0.61	0.39	0.40	0.33	ft-lbf/in	
<u>Specific Gravity</u>								ASTM D792
	1.20	1.20	1.20	1.21	1.21	1.22	N/A	
<u>Resistivity</u>								ASTM D257
Volumetric	6.24E+13	> 2.0E+12	1.60E+12	2.15E+07	1.31E+06	7.22E+05	ohms*cm	
Surface	> 2.0E+12	7.47E+11	8.85E+10	2.53E+06	7.44E+04	4.98E+05	ohms^2	

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