

**15% Highly Filled Carbon Nanotube Filled Polypropylene
Masterbatch**
6003
PRODUCT DESCRIPTION

15% active carbon nanotubes dispersed in a Polypropylene (PP) resin matrix suitable for twin screw extrusion masterbatch letdown applications. Alternative description: PR00552.

GENERAL INFORMATION

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

PHYSICAL PROPERTIES	Typical Value Range	Units	Method
Specific Gravity	0.88 - 0.94	N/A	ASTM D792
Moisture Content	< 1	%	ASTM D6980
Pellet Count	2.3 - 3.3	g/100 pellets	

STORAGE, SHELF LIFE, PROCESSING LIMITATIONS, AND PACKAGING

Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use and out of direct sunlight. Reseal bag after use. Product is shelf stable for at least 1 year and must be processed under 300 °C. Compatible with Polyolefins. 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 PP 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	263428	299807	313721	330382	352511	365742	psi	
Strength	5303	5379	5540	5647	5930	6000	psi	
Elongation @ Break	10.5	10.5	8.8	7.41	8.62	7.49	%	
<u>Flexural</u>								ASTM D790
Modulus	214472	245250	251299	255975	273360	290457	psi	
Strength	6704	7417	7481	7631	7909	8147	psi	
<u>Impact (IZOD)</u>								ASTM D256 & ASTM D4812
Unnotched	14.8	13.8	11.8	12.4	12.7	12.0	ft-lbf/in	
Notched	0.33	0.45	0.49	0.27	0.28	0.78	ft-lbf/in	
<u>Specific Gravity</u>								ASTM D792
	0.91	0.91	0.92	0.92	0.93	0.93	N/A	
<u>Resistivity</u>								ASTM D257
Volumetric	> 2.0E+12	> 2.0E+12	> 2.0E+12	2.56E+07	4.01E+06	1.16E+06	ohms*cm	
Surface	> 2.0E+12	1.04E+12	4.98E+11	6.36E+05	8.16E+04	4.21E+03	ohms^2	

Important Notice Regarding this Information

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