



THE CARBON NANOTUBE SPECIALIST

NANO-ENGINEER YOUR FUTURE



PLASTICYL

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## PLASTICYL™ PA1503 Technical Data Sheet

### General Information

#### Description

PLASTICYL™ is a family of Multi-Wall Carbon Nanotube (MWNT) thermoplastic concentrates for applications requiring superior electrical conductivity and electrostatic discharge (ESD) properties. PLASTICYL™ PA1503 is a conductive masterbatch based on polyamide 6. Because of its high flow, PLASTICYL™ PA1503 is ideal for injection molding and extrusion processes.

#### Key Applications

- Electrostatic Discharge (ESD) and electrically conductive parts
- Electrical and Electronics (E&E), automotive and industrial
- Injection molding, extrusion

#### Benefits

- Excellent electrical conductivity at low loading
- Retention of key mechanical properties
- Ease of processing
- Meets SAE J1645 automotive standards

### Technical Data

#### Main Characteristics

CARBON NANOTUBES LOADING (%wt)	REAL DENSITY (G/L) ISO 1183	MFI (G/10 MIN) NON STANDARD TEST : 280°C ; 20 KG ; 4 MM	MELTING POINT (°C) ISO 11357-1,-3
15 ± 1,0	1175	3,16	221

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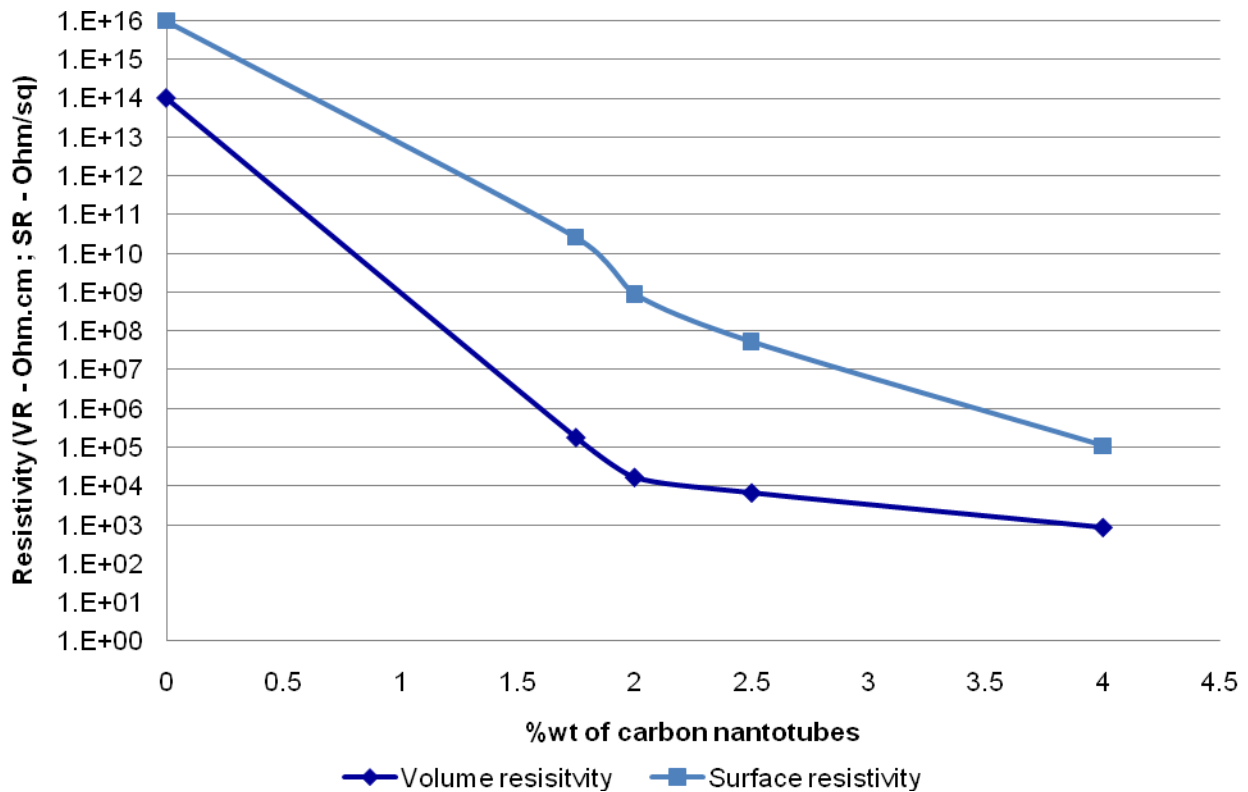
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**Typical Performance after Dilution**

	STANDARD	UNITS	NEAT POLYAMAMIDE 6	DILUTION TO 1 % <sub>WT</sub> OF CNT	DILUTION TO 3 % <sub>WT</sub> OF CNT
Melt flow index (280°C ; 1,2 kg)	ISO 1133:1997	g/10 min	-	42,48	5.40

N.B.: Compounds were processed using an L/D ratio and a 48 twin-screw extruder under proprietary conditions.

**Percolation Curves for Volume and Surface Resistivity**



N.B.: Electrical resistivity measurement in accordance to CTM E043 and CTM E402 (Cabot Testing Method), on standard injection molded IZOD specimens.

*In order to get well-dispersed CNT aggregates, Nanocyl recommends the use of polymers with a high Melt Flow Index (MFI).*

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## Commercial/Safety Information

### Packaging

- 5 kg boxes.
- 25 kg sealed bags.
- 600 kg octabins.

### Minimum Order Quantity

Nanocyl's minimum order quantity for PLASTICYL™ PA1503 is 5 kg.

### Custom Grades

Besides the commercial grades, Nanocyl is able to toll-compound any type of PA masterbatches to meet its clients' needs.

### Health and Safety

A Material Safety Data Sheets (MSDS) is available to provide both workers and emergency personnel with the proper procedures for handling or working with the PLASTICYL™ PA1503. This MSDS includes information such as physical data (form and color, melting point, etc.), handling and storage recommendations, first aid measures and ecological information. The Safety Data Sheet is provided with any order and should be observed.

## Disclaimer

This information is intended to be used only as a guideline for designers and users of modified thermoplastics. All information is believed to be accurate but is given without acceptance of liability. Users should make their own assessment of the suitability of the product for the purposes required. Properties may be materially affected by extrusion and molding parameters as well as by the shape and size of the part. No information supplied by Nanocyl constitutes a warranty regarding the product performance.

**For technical assistance, sales or further information, please contact us :**

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