



THE CARBON NANOTUBE SPECIALIST

NANO-ENGINEER YOUR FUTURE

PLASTICYL

PLASTICYL™ PBT1501 / 5 November 2009 / V05 - Page 1 of 3

## PLASTICYL™ PBT1501 Technical Data Sheet

### General Information

#### Description

PLASTICYL™ is a family of Multi-Wall Carbon Nanotubes (MWNT) thermoplastic concentrates for applications requiring superior electrical conductivity and electrostatic discharge (ESD) properties. PLASTICYL™ PBT1501 is a conductive masterbatch based on Polybutylene Terephthalate. Because of its high flow, PLASTICYL™ PBT1501 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
- Electronic housing

#### Benefits

- Excellent electrical conductivity at low loading
- Retention of key mechanical properties
- Ease of processing

### Technical Data

#### Main Characteristics

CARBON NANOTUBES LOADING (% <sub>WT</sub> )	REAL DENSITY (G/L) ISO 1183	MFI (G/10 MIN) NON-STANDARD TEST : 250°C ; 20 kg ; 4 mm	MELTING POINT (°C) ISO 11357-1,-3
15 ± 1,0	1300	0,88	227

#### Nanocyl S.A.

Rue de l'Essor 4      Tel +32 71 750 380  
 B-5060 Sambreville      Fax +32 71 750 390  
 BELGIUM      sales@nanocyl.com

#### US contact

info-us@nanocyl.com



www.nanocyl.com



THE CARBON NANOTUBE SPECIALIST

NANO-ENGINEER YOUR FUTURE

# PLASTICYL

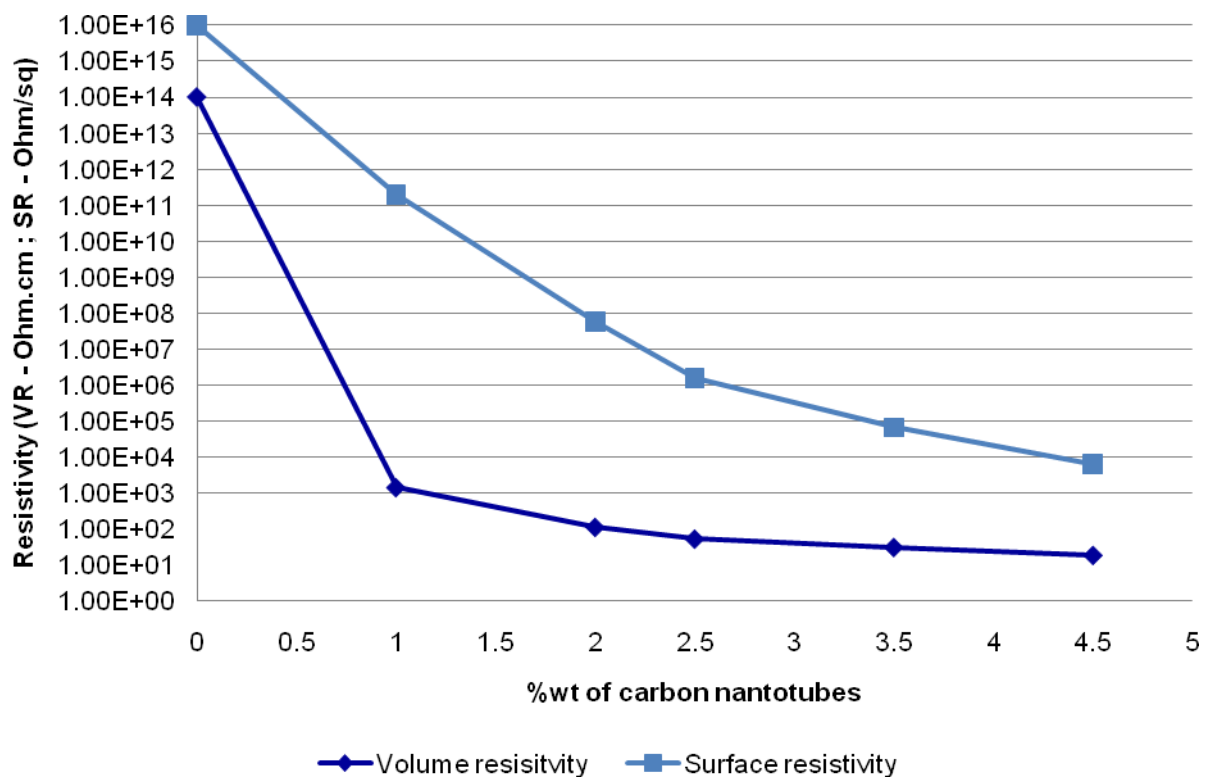
PLASTICYL™ PBT1501 / Technical Data Sheet / Page 2 of 3

## Typical Performance after Dilution

	STANDARD	UNITS	NEAT PBT	DILUTION TO 3 % <sub>WT</sub> OF CNTs	DILUTION TO 5 % <sub>WT</sub> OF CNTs
Melt flow index (250°C; 2,160kg*; 5 kg**)	ISO 1133:1997	g/10 min	-	3.76*	5,51**

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).**

### Nanocyl S.A.

Rue de l'Essor 4  
B-5060 Sambreville  
BELGIUM  
Tel +32 71 750 380  
Fax +32 71 750 390  
sales@nanocyl.com

### US contact

info-us@nanocyl.com



www.nanocyl.com



THE CARBON NANOTUBE SPECIALIST

NANO-ENGINEER YOUR FUTURE

PLASTICYL

PLASTICYL™ PBT1501 / Technical Data Sheet / Page 3 of 3

## Commercial/Safety Information

### Packaging

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

### Minimum Order Quantity

Nanocyl's minimum order quantity for PLASTICYL™ PBT1501 is 5 kg.

### Custom Grades

Besides the commercial grades, Nanocyl is able to toll-compound any type of PBT 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™ PBT1501. 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 :**

#### Nanocyl S.A.

Rue de l'Essor 4  
B-5060 Sambreville  
BELGIUM

Tel +32 71 750 380  
Fax +32 71 750 390  
sales@nanocyl.com

#### US contact

info-us@nanocyl.com



[www.nanocyl.com](http://www.nanocyl.com)