



## **CNTs-Polypropylene Resin Matrix PRODUCT DATA SHEET**

### **CNTs-Polypropylene Resin Matrix**

#### **Description**

Carbon nanotubes are simple substances composed of carbon atoms and can be regarded as hollow tubular structures formed by the curling of graphene. On the surface of carbon nanotubes, the carbon atoms are bonded to each other in the form of  $sp^2$  hybrid orbitals, which are arranged as hexagonal graphite layers. In theory, this regular hexagonal structure is perfectly evenly distributed over the entire surface of the carbon nanotubes. Topologically, the common structure and properties of graphene and carbon nanotubes are one of the important factors for their similarity.

Abvigen offers high quality CNTs-polypropylene resin matrix. The product has high repeatability between batches, which can meet the needs of various customers for personalized materials such as research and development, testing and production.

For custom sizes, formulations or bulk quantities please contact our customer service department.

**Website:** [www.abvigen.com](http://www.abvigen.com) **Phone:** +1 929-202-3014 **Email:** [info@abvigenus.com](mailto:info@abvigenus.com)

#### **Characteristics**

**Type:** CNTs-Polypropylene Resin Matrix

**Size:** 25 g

**CNTs purity:** 95%

**Outside diameter:** >50 nm

**Inside diameter:** 5-15 nm

**Length:** 5-20  $\mu$ m

**CNTs content:** 20wt%

**Polypropylene (homopolymer) resin matrix:** 80wt%

#### **Advantages**

Excellent wear resistance

Not oozing

Not falling off



Satisfying electronic products clean requirements

Good stability and controllability for electrical resistivity by changing the amount of the use of the composite material

Excellent impact resistance--Using the product can be significantly improved the impact strength of the composite material, and do not cause tensile and bending strength lowered

Meet customer's need for antistatic properties and mechanical properties requirements

When preparing a flame retardant antistatic composite material, the use of conductive carbon black will reduce the flame retardant rating of the material, while the use of carbon nanotubes will improve the material flame retardant grade

#### **The Product Making Method Steps:**

- 1) Carbon nanotubes are sufficiently dispersed in the molten state polypropylene (Homopolymer) resin matrix.
- 2) Mixed thoroughly.
- 3) Cooling.
- 4) Cutting--Granular--for better use of this material.

#### **Testing Resistivity Experimental Parameters:**

- 1) To dilute the product by using polypropylene (Homopolymer) resin matrix to normal usage concentration: CNTs 2wt%, CNTs 2.5wt%, CNTs 3wt%, CNTs 3.5wt%.
- 2) Molding, specimen thickness of 1.5 mm, the testing standards GB / T 1410-2006, test voltage 100 V.

#### **Ordering Information**

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