



## **CNTs-High Density Polyethylene Resin Matrix PRODUCT DATA SHEET**

### **CNTs-High Density Polyethylene 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-high density polyethylene 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-High Density Polyethylene 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%

**High Density Polyethylene Resin Matrix:** 80wt%

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

- 1) Carbon nanotubes are sufficiently dispersed in the molten state High Density Polyethylene (HDPE) resin matrix.
- 2) Mixed thoroughly.



3) Cooling.

4) Cutting--Granular--for better use of this material.

### **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

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

Threshold permeability value below the conductive carbon black

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

### **Ordering Information**

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