Nickel-Coated Multi-Walled Carbon Nanotubes, 5-15 nm
PRODUCT DATA SHEET

Nickel-Coated Multi-Walled Carbon Nanotubes, 5-15 nm

Description

Carbon nanotubes as one-dimensional nanomaterials, many researchers treat carbon nanotubes as one-dimensional materials templates. Multi-walled carbon nanotubes (MWCNTs) are materials made of multiple layers of carbon nanotubes stacked on top of each other, each layer can be viewed as a single-walled carbon nanotube. This unique structure gives multi-walled carbon nanotubes a range of excellent physical and chemical properties, including high strength, high toughness, good electrical conductivity and chemical stability. MWCNTs are widely used in many fields. In industries such as coatings, rubber, plastics, inks and batteries, multi-walled carbon nanotubes are often used as reinforcement materials due to their excellent mechanical properties and chemical stability. Elemental cobalt and nickel are ferromagnetic just as Iron, so the cobalt, nickel and its alloys is a good magnetic material, which can be deposited in a layer of carbon nanotubes coated with nickel, cobalt and their alloys to obtain one-dimensional magnetic Materials and further to obtain one-dimensional magnetic nano-materials in the application of magnetic recording.

Abvigen offers high quality nickel-coated multi-walled carbon nanotubes, 5-15 nm. 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 **Phone: +1 929-202-3014 Email:** info@abvigenus.com

Characteristics

Type: Nickel-Coated Multi-Walled Carbon Nanotubes, 5-15 nm

Size: 1 g

Purity: > 98 wt% (from TGA & TEM)

Content of Nickel: > 60 wt% (XPS & Titration)

Content of CNTs: > 38 wt% (XPS & Titration)

Outside diameter: 5-15 nm (from HRTEM, Raman)

Inside diameter: 3-5 nm

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Length: ~50 μm (TEM)

Color: Black

Tap density: 0.27 g/cm^3

Manufacturing method: CVD

Advantages

High strength

High toughness

Good electrical conductivity

Good chemical stability

Applications

(1) additives in polymers; (2) catalysts; (3) electron field emitters for cathode ray lighting elements; (4) flat panel display; (5) gas-discharge tubes in telecom networks; (6) electromagnetic-wave absorption and shielding; (7) energy conversion; (8) lithium-battery anodes; (9) hydrogen storage; (10) nanotube composites (by filling or coating); (11) nanoprobes for STM, AFM, and EFM tips; (12) nanolithography; (13) nanoelectrodes; (14) drug delivery; (15) sensors; (16) reinforcements in composites; (17) supercapacitor.

Ordering Information

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