Silicon Graphene Carbon Nanotubes
PRODUCT DATA SHEET

Silicon Graphene Carbon Nanotubes

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. Silicon Graphene Carbon Nanotubes can effectively improve the electrical conductivity and mechanical properties, and effectively enhance tensile strength, hardness and elastic modulus characteristics.

Abvigen offers high quality silicon graphene carbon nanotubes. 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: Silicon Graphene Carbon Nanotubes

Size: 1 g

30wt% Silicon (Si) Nanopowder Parameters

Silicon Nanopowder / Nanoparticles (Si, metal basis)

True Density: 2.33 g/cm^3

Purity: 98.5%

APS: 50 nm

SSA: 80 m^2/g

Color: Yellow

Morphology: Near spherical

30wt% Graphene Nanopowder Parameters

Graphene has a two-dimensional structure of a carbonaceous new material. Graphene has excellent electrical, thermal and mechanical properties. Our graphene with a very large surface area 500 ~ 1200 m^2/g.

Purity: > 99wt%

Thickness: < 5 nm

Diameter: 1 µm - 12 µm

Specific surface area: 500 - 1200 m^2/g

Color: Black

Conductivity: 1000-1500 S/M

The product COA: C = 99.6%, O < 0.4%

40wt% Carbon Nanotubes Parameters

Multi Walled Carbon Nanotubes (MWNTs, MWCNTs)

Purity: > 97% (carbon nanotubes)

Average outside diameter: > 55 nm

Average inside diameter: 8 nm

Length: 10-30 µm (TEM)

SSA: > 60 m^2/g (BET)

Color: Black

Ash: < 1.5 wt%

Electrical conductivity: > 100 s/cm

Tap density: 0.12 g/cm^3

True density: ~2.1 g/cm^3

Ratio: CNTs : Si : Graphene = 4:3:3

Advantages

Effectively improve the electrical conductivity and mechanical properties

Effectively enhance tensile strength, hardness and elastic modulus characteristics

1378 US-206 Ste 6-126, Skillman, NJ USA
Email: info@abvigenus.com
Tel: 1-816-388- 0112 Fax: 1- 888-616-0161

Applications

Screen displays, electric motors, sensing devices, aerospace and automotive devices, body armor and tear-resistant cloth fibers and textiles products, sports equipments. Serve as a conductive metallic or semiconductor, conductive films in coatings, plastics, certain bioscience applications, solar and electronic applications, additives in polymers, catalysts, electron field emitters for cathode ray lighting elements, flat panel display, gas-discharge tubes in telecom networks, electromagnetic-wave absorption and shielding, energy conversion; lithium-battery anodes, hydrogen storage, nanotube composites (by filling or coating), nanoprobes for STM, AFM, and EFM tips, nanolithography; nanoelectrodes, drug delivery, sensors, reinforcements in composites, supercapacitor.

Ordering Information

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Email: info@abvigenus.com