

RESEARCH GRADES

Carbon Nanotubes

Research grades NC3101™

Purified multiwall carbon nanotubes & surface modified -COOH

General Information

Description

NANOCYL® NC3100™ series, double-wall carbon nanotubes, are produced via the Catalytic Chemical Vapor Deposition (CCVD) process and surface modified -COOH

Key Applications

A primary interest is in applications requiring high level of purity.

Benefits

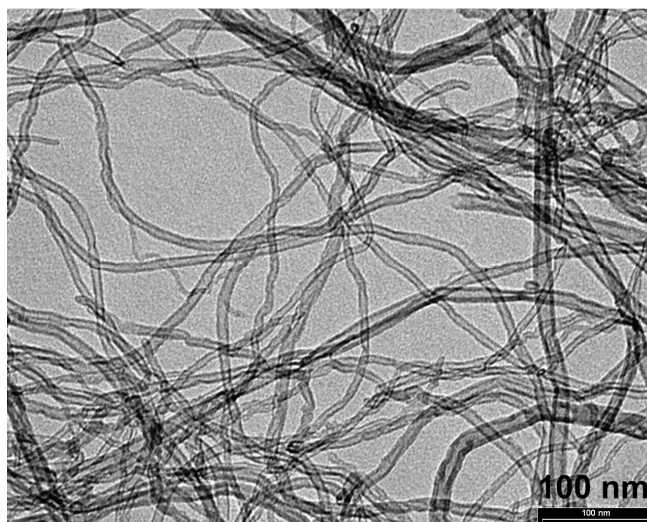
- High electrical conductivity
- High level of purity

Main Characteristics

NANOCYL® NC3100™ series (Figure 1), multiwall carbon nanotubes are produced via the Catalytic Chemical Vapor Deposition (CCVD) process.

Multiwall carbon nanotubes which exit the reactor are then purified to greater than 95% carbon and then functionalized with –COOH to produce the 3101 grade.

Figure 1. NC3100™ multiwall carbon nanotubes – scale : 100 nm - TEM.



Specific characterization of NC3101™

PROPERTIES	UNIT	VALUE	METHOD OF MEASUREMENT
<i>Average diameter</i>	10 ⁻⁹ m	9.5	High resolution Transmission Electron Microscopy (HRTEM)
<i>Average length</i>	μm	1.5	Transmission Electron Microscopy (TEM)
<i>Carbon purity</i>	%	> 80.0	Thermogravimetric analysis (TGA)
<i>Metal oxide</i>	%	< 5.0	Thermogravimetric analysis (TGA)
<i>-COOH groups (surface modification)</i>	%	> 8.0	Thermogravimetric analysis (TGA)
<i>Amorphous carbon</i>	%	*	High resolution Transmission Electron Microscopy (HRTEM)

* Pyrolytically deposited carbon on the surface of the CNT

Commercial/Safety Information

Packaging

NC3101™ multiwall carbon nanotubes (powder) are available in bottle with double caps (1g to 1 kg).

Minimum Order Quantity

Nanocyl's minimum order quantity for NC3101™ is 1 g.

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 NC3101™. 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

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