TECHNICAL DATA SHEET

Technical Data Sheet: Array-Grown Aligned Multi Walled Carbon Nanotubes 5-15nm

Product code: 030117

Revision 2026-11

Description

Multi walled carbon nanotubes grown as vertically aligned arrays by catalytic chemical vapor deposition and harvested as an aligned bundle powder. Tubes have an outer diameter of 5-15nm with bundle sizes of D50 20um or less, purity above 99 wt%, and very low residual metal content. The aligned, low-defect tubes and low catalyst residue suit applications where purity and tube integrity matter: conductive and antistatic polymer composites, mechanical reinforcement, battery and supercapacitor electrodes, conductive coatings and inks, and research requiring aligned or high-purity nanotubes.

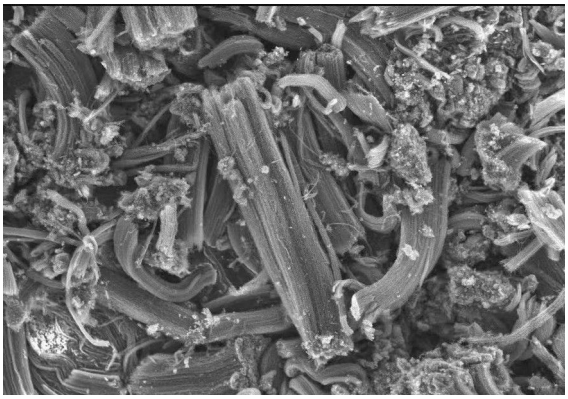
Specifications

Property	Specification	Typical
Appearance	Black powder	-
Outer diameter	5-15nm	-
Bundle size (D50)	≤20um	-
Purity	>99 wt%	99.5 wt%
Specific surface area (BET)	250-310 m2/g	300 m2/g
Tap density	0.02-0.08 g/cm3	0.03 g/cm3
Powder resistivity	≤1000 uOhm·m	-
Moisture	≤1 wt%	<0.5 wt%
Fe	≤200 ppm	100 ppm
Cr	≤10 ppm	-
Ni	≤20 ppm	-
Cu	≤10 ppm	-
Zn	≤10 ppm	-
Co	≤200 ppm	-

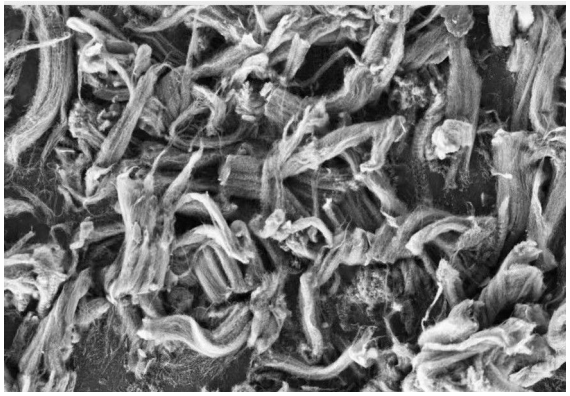
Values shown are specification limits; typical values are representative of production material. Outer diameter by SEM; bundle size by laser diffraction; purity by muffle furnace; specific surface area by nitrogen adsorption (BET); metals by ICP-AES.

Characterization

Representative SEM images of this grade are shown below. A representative Certificate of Analysis is available.



SEM, 1,000x, scale bar 50um, representative



SEM, 1,000x, scale bar 10um, representative

Applications

Suited to conductive and antistatic polymer composites, mechanical reinforcement, lithium-ion battery conductive additives, battery and supercapacitor electrodes, conductive coatings and inks, and research requiring aligned or high-purity nanotubes.

Storage and Handling

Store sealed, dry, at room temperature. Use respiratory protection when handling dry powder; see SDS.

Documentation

Representative data provided. A representative Certificate of Analysis is available. Safety Data Sheet at cheaptubes.com/nanomaterial-msds-safety-sheets.

Application results depend on formulation, equipment and process conditions; confirm with your own trials. Specifications reflect the product page at cheaptubes.com as of November 2026.