

TECHNICAL DATA SHEET

Graphitized Multi-Walled Carbon Nanotube Powders (Pristine, OH and COOH)

Product codes: 050102 to 050107 (pristine) · 050202 to 050207 (OH) · 050302 to 050307 (COOH)

Revision 2026-10

Description

Graphitized multi-walled carbon nanotube (MWCNT) powders produced by CCVD and graphitized at 2800 C. They have conductivity very close to that of graphite powder and ash below 0.1 wt%, at the cost of lower specific surface area than non-graphitized MWCNTs of similar size (compare the SSA values below with the Standard TDS). Fifteen grades cover five outer-diameter ranges in three surface conditions: pristine, OH functionalized and COOH functionalized. Non-standard graphitized grades may carry a 10-14 day lead time.

Specifications

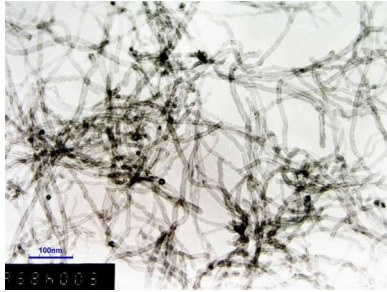
Surface	SKU	Prod. ID	OD (nm)	ID (nm)	Length (μm)	SSA (m ² /g)	Purity (wt%)
Pristine	050102	275	8-15	3-5	10-50	117	>99.9
Pristine	050103	277	10-20	3-5	10-30	100	>99.9
Pristine	050104	279	20-30	5-10	10-30	55	>95 *
Pristine	050106	281	30-50	5-10	10-20	[not specified]	>99.9
Pristine	050107	283	50-80	5-10	10-20	20	>99.9
OH	050202	287	8-15	3-5	10-50	117	>99.9
OH	050203	288	10-20	3-5	10-30	100	>99.9
OH	050204	289	20-30	5-10	10-30	55	>99.9
OH	050206	290	30-50	5-10	10-20	[not specified]	>99.9
OH	050207	286	50-80	5-10	10-20	20	>99.9
COOH	050302	292	8-15	3-5	10-50	117	>99.9
COOH	050303	293	10-20	3-5	10-30	100	>99.9
COOH	050304	294	20-30	5-10	10-30	55	>99.9
COOH	050306	295	30-50	5-10	10-20	[not specified]	>99.9
COOH	050307	291	50-80	5-10	10-20	20	>99.9
Characterization	Graphitization temperature 2800 C; ash (residue) <0.1 wt%; TEM micrographs on product pages (below). Raman IG/ID and TGA onset/residue: not published.						

All 15 grades: ash <0.1 wt%, electrical conductivity >100 S/cm, true density ~2.1 g/cm³. Functional group content is not published for the OH and COOH graphitized grades. * Value as shown in the specification block of the 20-30 nm pristine product page (050104), which is under review; the description on that page states 99.9 wt% purity.

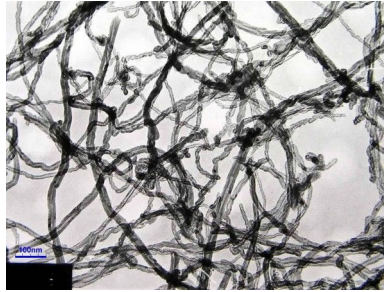
Grade Selection

- **Graphitized versus standard:** choose graphitized when overall conductivity matters more than having the highest specific surface area. The reduced surface area is still higher than that of other carbon additives.
- **By diameter:** 8-15 nm (117 m²/g, 10-50 μm) and 10-20 nm (100 m²/g) give the most surface area; 20-30 nm gives 55 m²/g; 50-80 nm gives 20 m²/g. SSA for the 30-50 nm grades is not published.
- **OH and COOH graphitized:** pick when surface groups are needed for dispersion in aqueous or polar systems or for coupling to a matrix, while keeping the graphitized structure.

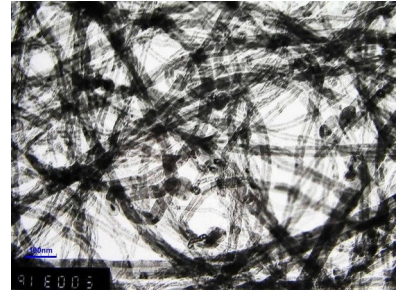
Representative Data



TEM, graphitized 8-15 nm (050102, ID 275). Scale bar 100 nm.



TEM, graphitized 20-30 nm (050104, ID 279). Scale bar 100 nm.



TEM, graphitized 30-50 nm (050106, ID 281). Scale bar 100 nm.

Micrographs are the images published on the cheaptubes.com product pages; instrument and imaging conditions are not stated. Micrographs shown are of the pristine graphitized grades.

Raman (IG/ID) and TGA (onset, residue) data are not published on the product pages for this family and are not shown here. Application loading data are not published; request application notes at sales@cheaptubes.com.

Storage and Handling

Store sealed, dry, at room temperature. Use local exhaust ventilation and respiratory protection when handling dry powder; see SDS. Disperse with surfactant (PVP, SDS or SDBS for aqueous systems) and high-shear mixing or sonication; oxygen-bearing groups aid wetting in water but do not make the powder water soluble.

Documentation

Values are representative of typical production and do not constitute a lot-specific guarantee. A lot-specific Certificate of Analysis (CoA) ships with each order.

Safety Data Sheet available 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 pages at cheaptubes.com as of October 2026. Entries marked [not specified] are not published for that grade; contact sales@cheaptubes.com.