

6000 Teutonia Avenue, Milwaukee, WI 53209 USA Tel: (800) 231-8327 (414) 438-3850 Fax: (414) 438-4234 email: techservice@sial.com_sigma-aldrich.com

Product Information

(6,5) Enriched Single-Wall Carbon Nanotubes

Catalog Number **773735**Store at Room Temperature

Synonym: SWCNT

Product Description

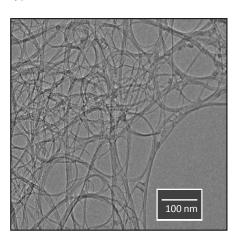
These Single-Wall Carbon Nanotubes (SWCNT) are produced using patented CoMoCAT™ synthesis technology. 773735 is a single-wall carbon nanotube product uniquely enriched in semiconducting tubes, with (6,5) chirality being the most abundant. ~95% of the SWCNTs in 773735 are semiconducting, with ~41% of those tubes being (6,5) chirality. 773735 is targeted for transistor, sensor, and biomedical applications.

Representative product characteristics are presented.

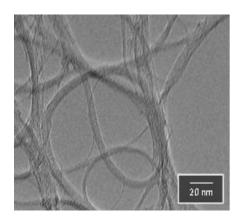
Typical Product Properties

Property (Measurement)	773735
Carbon Purity (TGA)	≥95 wt%
CNT Purity (TGA)	≥94 wt%
Semiconducting CNT Content (Opt. Abs)	95%
(6,5) CNT Content (NIRF)	≥40%
Average Diameter (NIRF)	0.78 nm
Median Length (AFM)	1 μm
Bulk Density (ASTM D7481)	0.1 g/cm ³
Moisture Content (TGA)	≤5 wt%
Specific Surface Area (BET)	≥700 m²/g
G/D Ratio (Raman [633 nm])	≥20
Standard Product Form	Powder

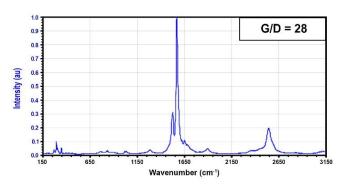
Typical SEM



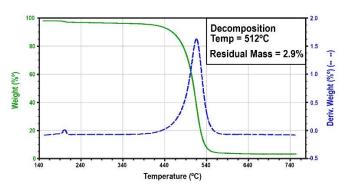
Typical SEM



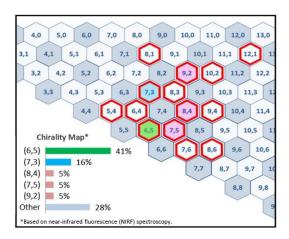
Typical Raman Analysis (633 nm)



Typical Thermogravimetric Analysis

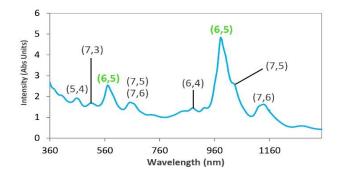


Typical Chirality Distribution

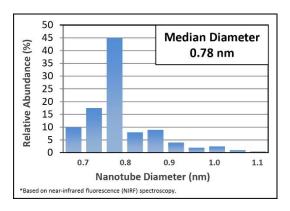


Typical Optical Absorbance

OA Peaks Corresponding to Eii Transition Energies of Included Chiral Species



Diameter Distribution



Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

CoMoCAT is a trademark of Chasm Advanced Materials, Inc.

RC,MAM 05/17-1