

# NANOTUBE COMPOUNDS

Uniformly Conductive Thermoplastics from RTP Company

## Quick Information

- ▶ **Precise, uniform surface resistivity**
- ▶ **High aspect ratio for conductivity at low loadings**
- ▶ **Maintain surface finish of neat resin**

Imagine a thermoplastic compound with a uniform surface resistivity of  $10^4$  to  $10^9$  ohms/sq with loading levels of just 4-7%. One that maintains a resin's key physical properties including ease of processing, shrink rate, impact strength, and surface finish. At RTP Company, we not only imagined it, we made it a reality.

Nanotube Compounds (NTC's) contain hollow carbon nanotubes that are thousands of times smaller in diameter than carbon fibers. This "nanoscale" size means an extremely high aspect ratio (length:diameter), thus giving conductive properties at very low loadings. A more uniform conductive surface reduces the "hot spots" found with a carbon fiber filled compound. These structures also enable thin-wall molds to fill at lower temperatures.

NTC's are not subject to static buildup like other dielectric plastic. They reduce cycle time and offer lower specific gravity than compet-

itive conductive materials. NTC's are a weight-saving alternative to other heavier materials. With low particulate generation, they are an ideal choice for applications where cleanliness is a consideration.

NTC's are ideally suited for wafer processing, disk-drive components and cleanroom applications. They are beneficial in automotive applications needing static discharge protection, such as fuel system components. Other automotive uses are body attachments like mirror housings, door handles, wheel covers, bumpers, fenders, and interior parts. In such applications, their conductivity makes them excellent candidates for electrostatic painting without using a conductive primer

Nanotube Compounds from RTP Company...another innovation from the leader in specialty compounding.

# NANOTUBE

### World Headquarters:

RTP Company  
580 East Front Street  
Winona, MN 55987  
phone: 507-454-6900  
800-433-4787  
fax: 507-454-4629  
website: [www.rtpcompany.com](http://www.rtpcompany.com)  
e-mail: [rtp@rtpcompany.com](mailto:rtp@rtpcompany.com)



**The Leader in Specialty Compounding**

### Manufacturing Facilities:



Winona, MN  
South Boston, VA  
Fort Worth, TX  
Indianapolis, IN  
Beaune, France  
Singapore  
Suzhou, China

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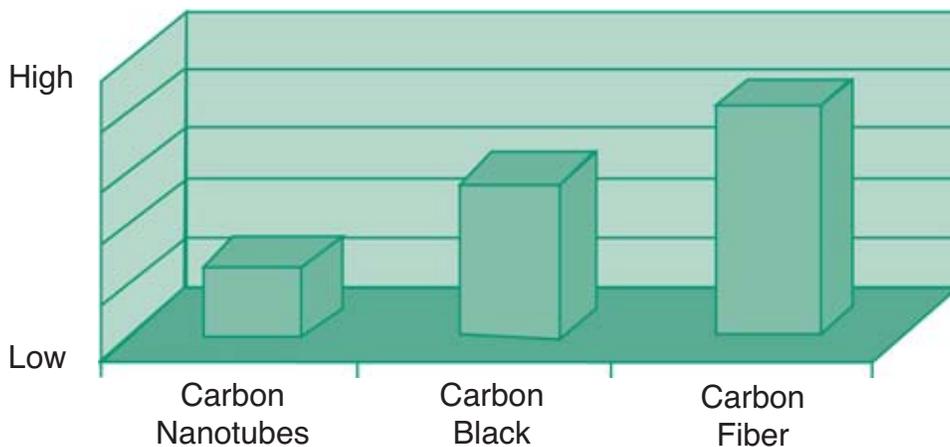
## RTP Carbon Nanotube Compounds

Nylon 6	PPS
Nylon 6/6	PEI
Nylon 12	PEEK
PC	PC/PBT
PBT	



Nanotubes allow compounds to meet the stricter cleanliness requirements of the electronics industry. Shown here is an RTP Company R&D engineer using a gas chromatograph to test a nanotube compound for ionic contamination.

## Liquid Particle Count



Carbon nanotube compounds provide critical ESD protection in removable storage drive

## Product Development Contact

Visit RTP Company's website for specific data sheet information or contact:

**Ned Bryant**  
Senior Product Development Engineer  
nbryant@rtpcompany.com

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RTP Company  
580 East Front Street  
Winona, MN 55987  
phone: 507-454-6900  
800-433-4787  
fax: 507-454-4629  
website: www.rtpcompany.com  
e-mail: rtp@rtpcompany.com



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