



# Troll Hair

## Technical Data & Spec Sheet

1mm to 2mm Carbon Nanotubes | Jan 2025

### Manufacturer

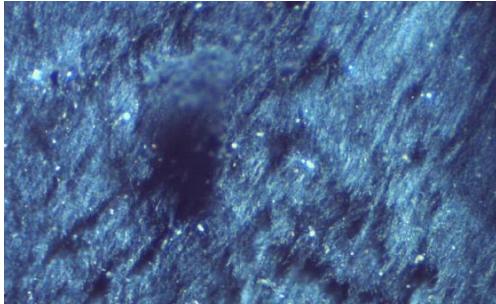
**Industrial CNT LLC (Troll Hair)** manufacturers carbon nanotubes in Nevada and ships to anywhere in the United States and internationally.

Location: [Las Vegas, USA](#)

Phone: [\(212\) 602-1401](#)

Email: [info@trollhair.com](mailto:info@trollhair.com)

### Images



*1mm to 2mm carbon nanotubes*



*processed for easy dispersion  
(carbon nanotubes in polyester)*



*(black CNT powder at macro scale)*

### Product Description

Long, multi-walled carbon nanotubes for use as a high strength materials additive for thermoplastics, resins, and other liquids.

### Material Specifications

Multiwalled: 10+ walls

Length: 0.8mm to 2mm

Diameter: 90nm to 120nm

Purity: 94% to 100% graphitic carbon  
(metal impurities)

CAS#: 308068-56-6

### Key Features

- 1) Over 100 gigapascals tensile strength
- 2) Thermal conductivity
- 3) Electric conductivity on par with gold (Au)
- 4) High chemical resistance & durability

### Processing And Implementation

Add 0.2% to 3% by weight to epoxy or plastic. Viscosity will increase dramatically with higher percentages. Use standard rotary mixer to disperse carbon nanotubes in liquid. Carbon nanotubes are, in general, hydrophobic and do not mix well in water.

### Case Studies & Performance

In FDM 3D printing with KyronMAX, a 0.2% concentration of our carbon nanotubes produced a 40% increase in tensile strength above baseline, including in the z-axis showing interlayer adhesion.

1% carbon nanotubes by weight in polyester resin increased tensile strength from 3.4 gigapascals to 4.4 gigapascals.

Shown to reduce brittleness in 3D printed parts.