

Identification of the substance: Multi Walled Nanotube

Substance name	Multi Walled Nanotube
EC	936-414-1
CAS	308068-56-6
IUPAC	Multi-Walled Carbon Nanotubes
Molecular formula	C
Forms in the market	Charged, water soluble; not charged, hydrophilic powder

Physical and chemical properties

Shape	Tubes
Size (nm)	Diameter: 2-6 nm; Length: 1-10 µm

Toxicological information

Inhalation acute toxicity	EC50 = 2 mg/kg (Toxic) LC50 = 1.33 mg/m ³ (Toxic)
Dermal acute toxicity	LD50 = > 2000 mg/kg bw (Nontoxic)
Oral acute toxicity	LD50 = > 5000 mg/kg bw (Nontoxic)
Genotoxicity	Nontoxic
Cytotoxicity	Nontoxic

Ecotoxicological information

Freshwater Acute toxicity (Daphnia)	EC50 = > 100 mg/L (Nontoxic)
Freshwater Acute toxicity (Alga)	EC50 = 134 mg/L (Nontoxic) EC50 = 120 mg/L (Nontoxic)
Freshwater Acute toxicity (Fish)	LC50 = >100 mg/L (Nontoxic)
Soil invertebrates (worms)	EC50 = >500 µg/L (Very toxic)
BAF-Bioaccumulation	No data

Application

Industrial uses	Plastic Additives
Improved properties	Electrical conductivity Thermal conductivity Abrasion resistance Flame retardant properties Mechanical properties Antistatic behaviour Shielding against electromagnetic waves
Polymeric matrix	Fluorocarbons, polystyrene (PS), poly(9-vinyl carbazole) (PVK), polyacrylonitrile (PAN), polycarbonate (PC)