

# Material Safety Data Sheet

Revision Date 11/16/2010

## 1 Identification of substance:

- **Product details:**
- **Trade name:** CARBON NANOPOWDER
- **Manufacturer/Supplier:**  
Nanostructured & Amorphous Materials, Inc.  
16840 Clay Road, Suite #113  
Houston, TX 77084, USA

## 2 Composition/Data on components:

**Chemical characterization:**

**Description: (CAS#)**                      SARA 313  
CARBON 7440-44-0                      No

Formula C

RTECS Number: FF5250100

## 3 Hazards identification

EMERGENCY OVERVIEW

Caution: Avoid contact and inhalation.

HMIS RATING

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 0

NFPA RATING

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 0

For additional information on toxicity, please refer to Section 11.

## 4 First aid measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and Copious amounts of water.

EYE EXPOSURE

In case of contact with eyes, flush with copious amounts Of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

**5 Fire fighting measures**

EXPLOSION DATA

Dust Potential: This material, like most materials in Powder form, is capable of creating a dust explosion.

FLASH POINT

N/A

AUTOIGNITION TEMP

450 °C

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing Apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s): Emits toxic fumes under fire conditions.

**6 Accidental release measures**

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

**7 Handling and storage**

HANDLING

User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

#### STORAGE

Suitable: Keep tightly closed. Keep away from heat, sparks, and open flame. Store in a cool dry place.

### **8 Exposure Controls / PPE**

#### ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

#### PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and Approved under appropriate government standards such as NIOSH (US) or CEN(EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.

Hand: Protective gloves.

Eye: Chemical safety goggles.

#### GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

#### EXPOSURE LIMITS, RTECS

Country Source Type Value

USA MSHA Standard

Remarks: Nuisance Particulates.

USA OSHA. PEL 8H TWA 15 MG/M3, TOTAL DUST

New Zealand OEL

Remarks: check ACGIH TLV

#### EXPOSURE LIMITS

Country Source Type Value

OSHA. REL 2.1 mg/m3

### **9 Physical and chemical properties:**

Appearance

Physical State: Solid

Color: Black

Form: Powder Granules

Odor: Odorless

Property	Value	At Temperature or Pressure
Molecular Weight	12.01 AMU	
pH	6.0 - 9.0	
BP/BP Range	N/A	
MP/MP Range	N/A	
Freezing Point	N/A	
Vapor Pressure	< 0.1 mmHg	20 °C

Vapor Density	N/A
Saturated Vapor Conc.	N/A
Bulk Density	0.336 kg/l
Odor Threshold	N/A
Volatile%	N/A
VOC Content	N/A
Water Content	N/A
Solvent Content	N/A
Evaporation Rate	N/A
Viscosity	N/A
Surface Tension	N/A
Partition Coefficient	N/A
Decomposition Temp.	N/A
Flash Point	N/A
Explosion Limits	N/A
Flammability	N/A
Autoignition Temp	450 °C
Refractive Index	N/A
Optical Rotation	N/A
Miscellaneous Data	N/A
Solubility	Solubility in Water: Insoluble. Solvent: Insoluble. Other Solvents: ORGANIC SOLVENTS

N/A = not available

#### **10 Stability and reactivity**

##### STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

##### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

##### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

#### **11 Toxicological information**

##### ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

##### SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and

toxicological properties have not been thoroughly investigated.

TOXICITY DATA

Intravenous  
Mouse  
440 MG/KG  
LD50

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat  
Dose: 167 MG/KG  
Route of Application: Subcutaneous  
Exposure Time: (8D PREG)  
Result: Effects on Fertility: Post-implantation mortality(e.g.,  
dead and/or resorbed implants per total number of implants).

**12 Ecological information:**

No data available.

**13 Disposal considerations**

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION  
Contact a licensed professional waste disposal service to dispose  
of this material. Dissolve or mix the material with a combustible  
solvent and burn in a chemical incinerator equipped with an  
afterburner and scrubber. Observe all federal, state, and  
local environmental regulations.

**14 Transport information**

DOT  
Proper Shipping Name: None  
Non-Hazardous for Transport: This substance is  
considered to be non-hazardous for transport.  
IATA  
Non-Hazardous for Air Transport: Non-hazardous for air  
transport.

**15 Regulatory Information**

EU ADDITIONAL CLASSIFICATION  
S: 24/25-22  
Safety Statements: Avoid contact with skin and eyes. Do not  
breathe dust.

US CLASSIFICATION AND LABEL TEXT  
US Statements: Caution: Avoid contact and inhalation.

UNITED STATES REGULATORY INFORMATION  
SARA LISTED: No  
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

**16 Other information:**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Nanostructured & Amorphous Materials, Inc. , shall not be held liable for any damage resulting from handling or from contact with the above product.