



# MATERIAL SAFETY DATA SHEET

## Gold Composite Carbon Aerogel

Gold Composite Carbon Aerogel  
Date: 01/10/14  
Rev: 0

### Section 1 Product and Company Information

Trade Name:

**Gold Composite Carbon Aerogel, Gold-Nitrogen Composite Carbon Aerogel**

Marca: NANOLIT

Nº CAS: 7440-44-0

Chemical Formula: C

Identified uses : Laboratory chemicals, Manufacture of substances

REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration.

**Manufacturer/Supplier:**

Nanoquimia, S.L

PCT Rabanales 21. c/Cecilia Payné.Edif. Aldearén. M 4.7

14014 Cordoba (Spain)

Telephone: +34 957346221

Emergency Telephone: +34 915628469

### Section 2 - Hazards Identification

**Classification:** Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

This substance is not classified as dangerous according to Directive 67/548/EEC.

**Label elements:** The product does not need to be labelled in accordance with EC directives or respective national laws.

**Emergency Overview:**

Mechanical processing of product may result in lightweight fragments or dust. Inhalation of excessive amounts of dust from the product may cause mechanical irritation to the respiratory tract. Dermal contact may cause mechanical irritation to the skin.

**POTENTIAL HEALTH EFFECTS:**

**Inhalation:** Inhalation of airborne fragments or dust may cause mechanical irritation of the upper respiratory tract.

**Eye Contact:** Exposure to fragments or dust from this product can produce a drying sensation and mechanical irritation of the eyes.

**Skin Contact:** Skin contact with fragments or dust from this product can produce a drying sensation and mechanical irritation of the skin and mucous membranes.

**Ingestion:** This material is not intended to be ingested. If ingested in large quantity, the material may locally dehydrate contacted tissue, produce mechanical irritation, and/or result in blockage.

**Acute Health Hazards:**

Fragments and dust from this product are a physical irritant and may cause temporary irritation of scratchiness of the throat and/or itching and redness of the eyes and skin.

**Chronic Health Hazards:**

Product is not known to pose any chronic health hazards.

**Medical Conditions Aggravated by Exposure:**

Excessive inhalation of fragments or dust may aggravate pre-existing chronic lung conditions including, but not limited to, bronchitis, emphysema, and asthma. Dermal contact may aggravate existing dermatitis.

### Section 3 - Composition/Information on Ingredient

IUPAC Name	Percent	CAS number	EC number	Classification
Carbon (C)	> 90	7440-44-0	231-153-3	N/A
Diatomaceous Earth	< 5	61790-53-2	212-293-4	N/A
Gold (Au) nanoparticles	< 3	7440-57-5	231-165-9	N/A

### Section 4 - First Aid Measures

**ORAL EXPOSURE**

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



# MATERIAL SAFETY DATA SHEET

Gold Composite Carbon Aerogel  
Date: 01/10/14  
Rev: 0

## Gold Composite Carbon Aerogel

---

### INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

### DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

### 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.

---

### Section 5 - Fire Fighting Measures

---

#### EXTINGUISHING MEDIA

Suitable: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 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.

---

### Section 6 - Accidental Release Measures

---

#### METHODS FOR CLEANING UP

Ventilate area and wash spill site after material pickup is complete. Absorb on sand or vermiculite and place in closed containers for disposal.

---

### Section 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.

Store : Store in a cool, dry container. Keep container tightly closed

---

### Section 8 - Exposure Controls / PPE

---

#### ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

#### AIRBORNE EXPOSURE LIMITS

OSHA Permissible Exposure Limits (PEL):

Carbon – total particulate 15 mg/m<sup>3</sup> (TWA), respirable fraction - 5 mg/m<sup>3</sup> (TWA)

ACGIH Threshold Limit Value (TLV)

Graphite - (all forms except graphite fibers) – 2 mg/m<sup>3</sup> (TWA)

#### PERSONAL PROTECTIVE EQUIPMENT

Respiratory Where risk assessment shows air-purifying respirators are appropriate, use a dust mask type N95 (US) or P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

#### GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Wash contaminated clothing before reuse.

---

### Section 9 - Physical/Chemical Properties

---

#### Appearance

Form Monolithic solid or powder

Black solid

#### Materials Data

Solubility in Water Insoluble

Density 0.3-0.5 g cm<sup>-3</sup>

pH Not applicable

Odor characteristic odor

Melting Point >3652-3697°C

Boiling Point 4200°C

Thermal conductivity 119-165 W/m/k



# MATERIAL SAFETY DATA SHEET

Gold Composite Carbon Aerogel  
Date: 01/10/14  
Rev: 0

## Gold Composite Carbon Aerogel

---

Electrical Resistivity N/A  
Specific Heat N/A  
Heat of fusion 117 KJ/mol  
Vapor Pressure Not applicable  
Flammability Not applicable  
Ignition Temperature Not applicable  
Lower Explosion Limit Not applicable  
Upper Explosion Limit Not applicable  
Partition Coefficient N/A  
Decomposition Temp. N/A  
Flash Point N/A  
Explosion Limits N/A  
Flammability N/A  
Autoignition Temp N/A  
Refractive Index N/A  
Optical Rotation N/A  
Miscellaneous Data N/A  
Solubility N/A  
N/A = not available

---

### Section 10 - Stability and Reactivity

---

#### STABILITY

Stable: Stable.

#### HAZARDOUS DECOMPOSITION PRODUCTS

Involvement in a fire causes electrically conductive airborne particulate, carbon monoxide, carbon dioxide.

INCOMPATIBLEIES: Strong Oxidizers such as ozone, chlorine, permanganate may result in rapid combustion. Avoid contact with strong acids.

Hazardous Polymerization: Will not occur

---

### Section 11 - Toxicological Information

---

#### ROUTE OF EXPOSURE

Skin Contact: Exposure to gold compounds can cause contact dermatitis. May cause skin irritation.

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

Eye Contact: May cause eye irritation.

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

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.

---

### Section 12 - Ecological Information

---

Not regulated as dangerous for the environment

---

### Section 13 - Disposal Considerations

---

#### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

---

### Section 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.

---

### Section 15 - Regulatory Information

---

HAZARDOUS MATERIALS INFORMATION SYSTEM RATINGS:



# MATERIAL SAFETY DATA SHEET

## Gold Composite Carbon Aerogel

Gold Composite Carbon Aerogel  
Date: 01/10/14  
Rev: 0

---

HEALTH 1  
FLAMMABILITY 0  
REACTIVITY 0

### LABEL PRECAUTIONS:

Avoid contact with eyes, skin, and clothing.  
Avoid breathing dust.  
Wash thoroughly after handling.

LABEL FIRST AID: If airborne dust is inhaled, remove to fresh air. Seek medical attention for any breathing difficulty.

---

### Section 16 - Other Information

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.