



## Safety Data Sheet

Version 4.4  
Revision date 01/05/2020

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 Product identifiers

Product name : Silicon Dioxide  
Product Number : 4830HT  
CAS-No. : 7631-86-9

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

#### 1.3 Details of the supplier of the safety data sheet

Company : Nanostructured & Amorphous Materials Inc.  
1526 Katy Gap Road, Suite #302,  
Katy, TX 77494, USA

Telephone : +1 281-858-6571  
Fax : +1 281-858-6507

#### 1.4 Emergency telephone number

Emergency Phone # : +1 281-858-6571

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Specific target organ toxicity - repeated exposure (Category 1), H372

For the full text of the H-Statements mentioned in this Section, see Section 16

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)  
H372

Causes damage to organs through prolonged or repeated exposure.

Precautionary statement(s)

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P314 Get medical advice/ attention if you feel unwell.  
P501 Dispose of contents/ container to an approved waste disposal plant.

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none**

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Substances**

Formula :  $\text{SiO}_2$   
Molecular weight : 60.08 g/mol  
CAS-No. : 7631-86-9  
EC-No. : 231-545-4

**Hazardous components**

Component	Classification	Concentration
<b>Silicon Dioxide</b>	STOT RE 1;H372	<=100%

For the full text of the H-Statements mentioned in this Section, see Section 16.

**4. FIRST AID MEASURES**

**4.1 Description of first aid measures**

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

**In case of skin contact**

Wash off with soap and plenty of water.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available

**5. FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

**Suitable extinguishing media**

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

**5.2 Special hazards arising from the substance or mixture**

No data available

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**5.4 Further information**

No data available

**6. ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

**6.2 Environmental precautions**

Do not let product enter drains.

**6.3 Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

For disposal see section 13.

**7. HANDLING AND STORAGE****7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

**7.2 Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place.  
Keep in a dry place.

**7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control parameters****Components with workplace control parameters**

Components	CAS-No	Value	Control Parameters	Basis
Silicon Dioxide	7631-86-9	TWA	20Million particles per cubic foot	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts

	Remarks	Based on impinger samples counted by light-field techniques. mppcf X 35.3 = million particles per cubic meter = particles per c.c		
		TWA	80mg/m3 / %SiO2	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
		TWA	6 mg/m3	USA. NIOSH Recommended Exposure Limits
		PEL	6 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

## 8.2 Exposure controls

### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### Personal protective equipment

#### Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Full contact

Material: Nitrile rubber  
 Minimum layer thickness: 0.11 mm  
 Break through time: 480 min  
 Material tested: Dermatril®

#### Splash contact

Material: Nitrile rubber  
 Minimum layer thickness: 0.11 mm  
 Break through time: 480 min  
 Material tested: Dermatril®

Test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering

an approval for any specific use scenario.

**Body Protection**

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure**

Do not let product enter drains.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

a) Appearance	Form: powder Colour: colourlesswhite
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Melting point/range: > 1,600 °C (> 2,912 °F) - lit.
f) Initial boiling point and boiling range	2,230 °C (4,046 °F) - lit
g) Flash point	No data available
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	No data available
l) Vapour density	No data available
m) Relative density	2.2 - 2.6 g/mL at 25 °C (77 °F)
n) Water solubility	0.01 g/l - insoluble
o) Partition coefficient: n-octanol/water	No data available

p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

**9.2 Other safety information**  
No data available

**10. STABILITY AND REACTIVITY**

**10.1 Reactivity**

No data available

**10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

No data available

**10.4 Conditions to avoid**

No data available

**10.5 Incompatible materials**

Strong oxidizing agents

**10.6 Hazardous decomposition products**

In the event of fire: see section 5

**11. TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**

**Acute toxicity**

LD50 Oral - Rat - 3,160 mg/kg

Inhalation: No data available

Dermal: No data available

No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitisation**

No data available

**Germ cell mutagenicity**

Rat  
Unscheduled DNA synthesis

**Carcinogenicity**

Carcinogenicity - Rat - Inhalation  
Tumorigenic: Carcinogenic by RTECS criteria. Lungs, Thorax, or Respiration: Tumors.

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen OSHA.

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1

**Aspiration hazard**

No data available

**Additional Information**

RTECS: VV7310000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

**12. ECOLOGICAL INFORMATION****12.1 Toxicity**

No data available

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

- 12.4 Mobility in soil**  
No data available
- 12.5 Results of PBT and vPvB assessment**  
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- 12.6 Other adverse effects**  
No data available

**13. DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

**14. TRANSPORT INFORMATION**

**DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

**15. REGULATORY INFORMATION**

**SARA 302 Components**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Chronic Health Hazard

**Massachusetts Right To Know Components**

	CAS-No.	Revision Date
Silicon Dioxide	7631-86-9	1993-04-24

**Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
Silicon Dioxide	7631-86-9	1993-04-24

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
Silicon Dioxide	7631-86-9	1993-04-24



**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3.**

H372	Causes damage to organs through prolonged or repeated exposure.
STOT RE	Specific target organ toxicity - repeated exposure

**HMIS Rating**

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	0
Physical Hazard:	0

**NFPA Rating**

Health hazard:	2
Fire Hazard:	0
Reactivity Hazard:	0

**Further information**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment 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 Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.