



## Green Earth Aerogel Technologies

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 MSDS Date: 08/Apr/2010

# MATERIALS SAFETY AND DATA SHEET

## Section 1- Product Identification

Chemical Name:	Silicon Dioxide	Trade Name:	Silica Aerogel
Formula:	SiO <sub>2</sub>	Common Name:	Amorphous Silica
CAS Number:	7631-86-9 or 112926-00-8	Molecular Weight:	60.08 g/mole

## Section 2- Ingredients Typical Values

Silicon Dioxide	-----	95-100%
Sodium Oxide (Na <sub>2</sub> O)	-----	0-5%

Toxicological Data on Ingredients SiO<sub>2</sub> amorphous powder:

ORAL (LD50) Acute: > 10000mg/kg[Rat] DERMAL (LD50):Acute: > 5000mg/kg [Rabbit]

## Section 3- Physical and Chemical Data

Boiling Point:	2230 °C (Approx)	Vapor Pressure:	N/A
Melting Point:	>1600 °C	Solubility in Water:	0.012g/100ml
Specific Gravity:	0.3 - 0.4	Percent Volatile by Volume	N/A
Appearance:	White translucent powder, granules	Evaporation Rate:	N/A

## Section 4- Fire and Explosion Hazards

Flash Point:	Non-combustible
Ignition Point:	N/A
Extinguishing Media:	Any suitable for other materials involved
Special Fire fighting Procedure:	Wear self contained breathing apparatus if fire occurs in an enclosed space.
Unusual Fires and Explosion Hazards	N/A

## Section 5- Health Hazards Data

Potential Acute Health Effects	Slightly hazardous in case of skin contact (irritant) eye contact (irritant) of ingestion of inhalation
Potential Chronic Health Effects	Carcinogenic effects: 3 ( NOT Classified for humans) by IARC Mutagenic effects: NOT Available Teratogenic effects: NOT Available Developmental effects: NOT Available The substance may be toxic to lungs upper respiratory tract. Repeated or prolonged exposure to substance can produce target organs damage
Eye:	Silica particles may cause physical irritation if not removed
Skin Contact:	Constant prolonged exposure may cause dryness or chapping of exposed area
Skin Absorption:	Not absorbed by the skin
Ingestion:	No adverse affect unless quantity ingested causes physical discomfort
Inhalation:	As with any dust excessive exposure should be avoided. OSHA "Nuisances Dust" limitation should be observed.
Systemic and Other effects:	None



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### Section 5- Health Hazards Data (continued...)

Eye:	Irrigate with water immediately for 15 minutes. Repeat if needed to flush particle from eye. If irritation persists consult medical personnel.
Skin Contact:	Wash with soap and water to avoid skin drying or chapping
Ingestion:	N/A
Inhalation:	N/A

### Section 6- Reactivity Data Compatibility Data

Stability	Stable
Incompatibility	N/A
Hazardous decomposition Products	N/A
Hazardous Polymerization	Will not occur
Remarks on Reactivity	Hygroscopic/Hydrophilic

### Section 7- Storage Handling and Use

Action to take for spills	Shovel and sweep material into appropriate container. If necessary wash area with water.
Disposal Method	Biodegradable in Landfills. Dispose it in accordance to applicable regulations.

### Section 8- Personnel Protection

Ventilation	Local exhaust recommended minimizing dust exposure
Respiratory Protection	Approved "nuisance dust" mask should be worn in dust exposure areas.
Protective Clothing	Protective gloves can be worn
Eye Protection	Safety glasses with side shields should be worn and eye wash capabilities should be available.

### Section 9- Special Precautions and Additional Information

Precautions to be taken during handling and storage: Keep dry; Silica will absorb moisture from the air adequate ventilation and precautions should be employed whenever closed tanks, receptacles or other enclosed spaces containing powdered silica are accessed. Suspension of dust should be avoided.

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