SAFETY DATA SHEET

Revision Date 12/20/2023

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product Name : Silica Gel

CAS-No. : 7631-86-9
Brand : SKC Inc.

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

Identified Uses : Air sampling

1.3 Details of the supplier of the safety data sheet

Company : SKC, Inc.
863 Valley View Rd.
Eighty Four, PA 15330
USA

Telephone : 724-941-9701; 800-752-8472 (Mon - Fri, 8:30 a.m. - 5:00 p.m. EST)
Fax : 724-941-1369 (Mon-Fri, 8:30 a.m. - 5:00 p.m. EST)

1.4 Emergency telephone number

Emergency Phone # : CHEMTREC at 800-424-9300 (U.S./Canada); 703-741-5970 (Global)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

The substance is not classified according to the Globally Harmonized System (GHS).

2.2 Label elements

- **GHS label elements:** None
- **Hazard pictograms:** None
- **Signal word:** None
- **Hazard statements:** None
- **Classification system:**

NFPA ratings (scale 0 to 4)
Health = 1
Fire = 0
Reactivity = 0

- **HMIS-ratings (scale 0 to 4)**

Health = 1
Fire = 0
Reactivity = 0

2.3 Other hazards

The product is very adsorbent and may have a drying effect on skin and eyes.
When exceeding the OEL (Occupational Exposure Limit) a mechanical overburdening of the respiratory system is possible.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical characterization: Substances

Description:

CAS No. and description:	
7631-86-9	Amorphous silicon dioxide, chemically prepared

4. FIRST AID MEASURES

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin. Wash with water.
- **After eye contact:** Flush opened eye with large quantities of running water for at least 30 minutes. If symptoms occur, consult a doctor.
- **After swallowing:** Seek medical attention. Do not induce vomiting.
- **Most important symptoms and effects, both acute and delayed:** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

5. FIREFIGHTING MEASURES

5.1 **Suitable extinguishing agents:** Use firefighting measures that suit the environment.

5.2 **Hazardous combustion products:** No further relevant information available

5.3 **Protective equipment:** Wear personal protective equipment.

5.4 **Additional information:** Dispose of fire debris and contaminated firefighting water in accordance with official regulations.

6. ACCIDENTAL RELEASE MEASURES

6.1 **Personal precautions, protective equipment, and emergency procedures:**
Wear protective clothing.

6.2 **Environmental precautions:**
Keep contaminated washing water and dispose of appropriately.
Damp down dust with water spray.

6.3 **Methods and material for containment and cleaning up:**
Vacuuming or wet sweeping may be used to avoid dust dispersal.

6.4 **Reference to other sections:**
No dangerous substances are released.

7. HANDLING AND STORAGE

7.1 **Precautions for safe handling**
Prevent formation of dust.
Keep receptacles tightly sealed.
Provide suction extractors if dust is formed.
Use appropriate industrial vacuum cleaners or central vacuum systems for dust removal.
Take precautionary measures against static discharges.

7.2 **Information about protection against explosions and fires:**
When transferring this material into flammable solvents, use proper grounding to avoid static electric sparks.
The product is not flammable.

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

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Store away from foodstuffs.

Further information about storage conditions:
Keep receptacle tightly sealed.
Store in dry conditions.
This product is hygroscopic.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Additional information about design of technical systems: No further data; see Section 7

8.2 Components with limit values that require monitoring at the workplace

7631-86-9 amorphous silicon dioxide, chemically prepared	
IDLH	Short-term value: 3000 mg/m³ Immediately Dangerous to Life or Health
PEL	Long-term value: 80/%SiO2 mg/m³ OSHA TWA for amorphous silica
REL	Long-term value: 6 mg/m³ NIOSH TWA
TLV	Long-term value: 10* 5** mg/m³ ACGIH TWA *Total dust **Respirable fraction

8.3 Additional information: Valid lists at time of creation were used as basis.

8.4 Exposure controls:

Personal protective equipment:

General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.

Protection of hands:
Wear gloves for the protection against mechanical hazards.
Check protective gloves prior to each use for their proper condition.
Check the permeability prior to each new use of the glove.
Selection of the glove material on consideration of the penetration times, rates of diffusion, and rate of degradation
Use gloves of stable material (e.g., nitrile)

Material of gloves:
Butyl rubber, BR
Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

For the permanent contact in work areas without heightened risk of injury (e.g., laboratory), gloves made of the following material are suitable:
Butyl rubber, BR
Nitrile rubber, NBR

For the permanent contact, gloves made of the following materials are suitable:
Butyl rubber, BR
Nitrile rubber, NBR

Not suitable are gloves made of the following materials: Strong fabric gloves

Eye protection:
Safety glasses

Body protection:
Protective work clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

General Information

a) Appearance	Form: Powder Color: White
b) Odor	Odorless
c) Odor threshold	Not available
d) pH-value at 68 F (20 C)	4.0 to 9.0
e) Change in condition	
Melting point/Melting range	> 1700 C (> 3092 F)
Boiling point/Boiling range	> 1700 C (> 3092 F)

f) Conditions of flammability	Flash point: Not available
g) Flammability (solid, gaseous)	Product is not flammable.
h) Ignition temperature	Not available
i) Decomposition temperature	Not available
j) Auto igniting	Product is not self-igniting.
k) Danger of explosion	Product does not present an explosion hazard.
l) Explosion limits	Lower: Not determined Upper: Not determined
m) Vapor pressure at 68 F (20 C)	-- hPa
n) Density at 68 F (20 C)	2.17 to 2.20 g/cm³ (18.109 to 18.359 lbs/gal)
o) Bulk density at 68 F (20 C)	200 to 600 kg/m³
p) Vapor density	Not applicable
q) Evaporation rate	Not applicable
r) Solubility in / Miscibility with water	Insoluble
s) Coefficient of water/oil distribution	Not available
t) Viscosity	Dynamic at 68 F (20 C): -- mPas

9.2 Other information:
No further relevant information available

10. STABILITY AND REACTIVITY

10.1 Chemical stability: No decomposition if used according to specifications

10.2 Possibility of hazardous reactions: No dangerous reactions known

10.3 Conditions to avoid: No further relevant information available

10.4 Incompatible materials: No further relevant information available

10.5 Hazardous decomposition products: No dangerous decomposition products known

11. TOXICOLOGICAL INFORMATION

11.1 Information on the likely routes of exposure:
Delayed and immediate effects and chronic effects from short or long-term exposure

11.2 Information on toxicological effects:

Acute toxicity

LD/LC50 values that are relevant for classification		
7631-86-9 amorphous silicon dioxide, chemically prepared		
Oral	LD50	> 5000 mg/kg (rat) (OECD 401)
Dermal	LD50	> 6000 mg/kg (rabbit) (no guidance available)
Inhalative	LC0	> 140 to >2000 mg/m³/4h (rat) (OCED 403) Maximum attainable concentration, mortality does not appear

Primary irritant effect

On the skin		
7631-86-9 amorphous silicon dioxide, chemically prepared		
Irritation of skin	IS	0 (rabbit) (OECD 404)

On the eye		
7631-86-9 amorphous silicon dioxide, chemically prepared		
Irritation of eyes	IS	0 (rabbit) (OECD 405)

Respiratory sensitization: No further relevant information available

Skin sensitization: No further relevant information available

Additional toxicological information:

Carcinogenic categories:
- ***IARC (International Agency for Research on Cancer)***
  7631-86-9 amorphous silicon dioxide, chemically prepared 3
- ***NTP (National Toxicology Program):***
  Substance is not listed.
- ***OSHA-Ca (Occupational Safety & Health Administration):***
  Substance is not listed.

Repeated dose toxicity

7631-86-9 amorphous silicon dioxide, chemically prepared		
Oral	NOAEL (90 d)	9000 mg/kg bw/day (rat) (OECD 408)
Inhalative	NOAEC (90 d)	1 mg/m³ (rat) (OECD 413)

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):
- ***Carcinogenicity:*** *No further relevant information available*
- ***Mutagenicity***

7631-86-9 amorphous silicon dioxide, chemically prepared	
AMES Test	> 5 mg/plate (in-vitro) (OECD 471) negative, with and without metabolic activation ECHA 2012

- ***Reproductive toxicity***

7631-86-9 amorphous silicon dioxide, chemically prepared		
Oral	NOAEL (maternal toxicity) NOAEL (teratogenicity)	1350 mg/kg bw/day (rat) (OECD 414) 1350 mg/kg bw/day (rat) (OECD 414)

Specific target organ toxicity (single exposure): No further relevant information available

Specific target organ toxicity (repeated exposure): No further relevant information available

Aspiration hazard: No further relevant information available

12. ECOLOGICAL INFORMATION

12.1 Toxicity:

Aquatic toxicity

Fish toxicity	
7631-86-9 amorphous silicon dioxide, chemically prepared	
LC0 (96 h) (static)	10000 mg/l (zebra fish) (OECD 203)

Water flea toxicity	
7631-86-9 amorphous silicon dioxide, chemically prepared	
EC50 (24 h)	> 1000 mg/l (Daphnia magna) (OECD 202)

Algae toxicity	
7631-86-9 amorphous silicon dioxide, chemically prepared	
EC50 (72 h)	> 10000 mg/l (Scenedesmus subspicatus) (OECD 201) comparable substance

12.2 **Persistence and degradability:** No further relevant information available

12.3 **Other information:** Amorphous silica dioxide is chemically and biologically inert.
By the insolubility in water there is a separation at every filtration and sedimentation process.

12.4 **Bioaccumulative potential:** Does not accumulate in organisms

12.5 **Mobility in soil:** No further relevant information available

12.6 **Results of PBT and vPvB assessment:**
PBT: Not applicable
vPvB: Not applicable

12.7 **Other adverse effects:** No further relevant information available

13. DISPOSAL CONSIDERATIONS

13.1 **Recommendation:** Disposal must be made according to official regulations.

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use, or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state, and local requirements.

14. TRANSPORT INFORMATION

14.1 **UN-Number - *DOT, ADR, ADN, IMDG, IATA:*** None

UN proper shipping name - *DOT, ADR, ADN, IMDG, IATA:* None

Transport hazard class(es) - *DOT, ADR, ADN, IMDG, IATA Class:* None

Packing group - *DOT, ADR, IMDG, IATA:* None

Environmental hazards: Not applicable

Special precautions for user: Not applicable

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

Transport/Additional information: Not dangerous according to the above specifications
Recommendation for air transport: Cargo aircraft only

15. REGULATORY INFORMATION

15.1 **Safety, health, and environmental regulations/legislation specific for the substance or mixture:**

SARA
SARA 302/304
Substance is not listed.
SARA 313
Substance is not listed.

TSCA (Toxic Substances Control Act):
Substance is listed.

Proposition 65
Chemicals known to cause cancer:
Substance is not listed.
Chemicals known to cause reproductive toxicity for females:
Substance is not listed.
Chemicals known to cause reproductive toxicity for males:
Substance is not listed.

Chemicals known to cause developmental toxicity:
Substance is not listed.

Carcinogenic categories

EPA (Environmental Protection Agency)
Substance is not listed.

TLV (Threshold Limit Value established by ACGIH)
Substance is not listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)
Substance is not listed.

Canadian DSL
7631-86-9 amorphous silicon dioxide, chemically prepared

Canadian NDSL
Substance is not listed.

European EINECS
Substance is listed.

Philippines Inventory of Chemicals and Chemical Substances PICCS
Substance is listed.

Inventory of the Existing Chemical Substances manufactured or imported in China IECSC
Substance is listed.

Australian Inventory of Chemical Substances AICS
Substance is listed.

Existing and New Chemical Substance List ENCS
7631-86-9 amorphous silicon dioxide, chemically prepared 1-548

Korean Existing Chemical Inventory KECI
7631-86-9 amorphous silicon dioxide, chemically prepared KE-31032

GHS label elements: None

Hazard pictograms: None

Signal word: None

Hazard statements: None

16. OTHER INFORMATION

Abbreviations and acronyms:
ADR: *Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*
IMDG: *International Maritime Code for Dangerous Goods*
DOT: *U.S. Department of Transportation*
IATA: *International Air Transport Association*
ACGIH: *American Conference of Governmental Industrial Hygienists*
NFPA: *National Fire Protection Association (USA)*
HMIS: *Hazardous Materials Identification System (USA)*
LC50: *Lethal concentration, 50 percent*
LD50: *Lethal dose, 50 percent*
PBT: *Persistent, Bioaccumulative, and Toxic*

Disclaimer
For approved uses only. Not for drug, household, or other uses

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. SKC Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

Latest Change(s): Updated SDS to bring into compliance with the GHS

Last Update: December 2023