

Safety Data Sheet

According to Regulation (EU) No. 1907/2006 (REACH), Annex II
(COMMISSION REGULATION (EU) No 453/2010)

Version: 1.0/EN
Product name: Silica gel

Prepared date: 08/08/2013
Revision date: 08/08/2013

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: Silica gel
Chemical name: Silicon dioxide
REACH Reg. No.: 01-2119379499-16-0121
CAS No.: 7631-86-9

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

Identified uses: Used in a wide variety of industrial applications.
Uses advised against: No information available.

1.3 Details of the supplier of the SDS

Only Representative: REACH24H CONSULTING GROUP
Address: Suite 1E, Paramount Court, Corrig Road, Sandyford, Dublin 18, Ireland
E-mail: Info@reach24h.com
Tel: +353 1 8899951

Manufacturer:
Address:
Postcode:
E-mail:
Telephone:
Fax:



Importer:
Address:
E-mail:
Telephone:



1.4 Emergency telephone number



SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008[CLP]

Not classified as a hazardous substance.

Classification according to Directive 67/548/EEC[DSD] or Directive 1999/45/EC[DPD]

Not classified as a hazardous substance.

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2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008[CLP]

Hazard pictogram(s): No pictogram is used.

Signal word: No signal word is used.

Hazard statement(s): No hazard statement.

Precautionary statement(s): No precautionary statement.

Supplemental Hazard information (EUH):

No information available.

Special rules for supplemental label elements for certain mixtures:

No information available.

2.3 Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substance/Preparation information

Substance name: Silicon dioxide

Index No.: None

CAS No.: 7631-86-9

EC No.: 231-545-4

Purity: >98%

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes:

In all cases of doubt, or when symptoms persist, seek medical attention.

Following inhalation:

Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Get medical attention if you feel unwell.

Following skin contact:

Wash with soap and plenty of water. If skin irritation occurs: Get medical attention.

Following eye contact:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical attention.

Following ingestion:

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Rinse mouth with water. Never give anything through mouth to an unconscious person. Call a POISON Center or doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: May cause dryness and irritation to mucous membranes, nose, and throat. Symptoms may include coughing, sore throat and wheezing.

Skin Contact: May cause irritation with dryness and abrasion.

Eye Contact: May cause irritation, redness and pain.

Chronic Exposure: Repeated exposure may cause symptoms similar to those listed for acute effects. Synthetic amorphous silica does not produce silicosis.

4.3 Indication of the immediate medical attention and special treatment needed

No information available.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Use extinguishing media suitable for surrounding environment.

Unsuitable extinguishing media: No information available.

5.2 Special hazards arising from the substance or mixture

Fire: Not considered to be a fire hazard.

Explosion: Not considered to be an Explosion hazard.

Oxides of carbon and silicon may be formed when heated to decomposition.

5.3 Advice for fire-fighters

Wear self-contained breathing apparatus in circumstances where large quantities of the substance are involved in a fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Do not breathe dust. Avoid contact with the skin, eyes and clothing.

Use personal protective equipment.

6.2 Environmental precautions

Do not discharge into drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Vacuum spilled material and place in closed plastic bags for disposal. Avoid raising dust

6.4 Reference to other SECTIONS

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See SECTION 7 for information on safe handling.
See SECTION 8 for information on personal protection equipment.
See SECTION 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

No special measures necessary provided product is used correctly. If necessary - local ventilation. Take precautionary measures against electrostatic discharges. Observe all warnings and precautions listed for the product. Avoid dust formation. Use personal protective equipment.

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end use(s)

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

SECTION 8 : Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

Austria: TWA 4 mg/m³ inhalable aerosol
Belgium: TWA 10 mg/m³
Denmark: TWA 2 mg/m³ inhalable aerosol; STEL 4 mg/m³ inhalable aerosol
Germany: TWA 4 mg/m³ inhalable aerosol
United Kingdom: TWA 6 mg/m³ inhalable aerosol; TWA 2.4 mg/m³ respirable aerosol
USA: NIOSH REL: TWA 6 mg/m³
OSHA PEL : TWA 20 mppcf (80 mg/m³/%SiO₂)

DNEL (Derived No Effect Level) for workers and the general population:

	Route	Type of effect	DNEL
For the worker	Inhalation	Long-term – local effects	4 mg/m ³

PNEC (Predicted No Effect Concentration) values:

Not applicable.

8.2 Exposure controls

Appropriate engineering controls:

Use local exhaust or general room/dilution ventilation sufficient to maintain employee exposure below permissible exposure limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

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Personal protective equipment:

Eye and face protection: If eye exposure to powder is likely, use tight fitting chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

Skin protection: Protection gloves: Cloth. Leather. Rubber.
Other protection equipment: Boots, aprons or chemical suits should be used when necessary to prevent skin contact.

Respiratory protection: Use NIOSH approved dust filter respirator for exposure above permissible exposure limits. The respiratory use limitations made by NIOSH or the manufacturer must be observed. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Environmental exposure controls:

Do not discharge into drains/surface waters/groundwater.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Solid, white powder
Odour:	odorless
pH:	6.0 - 7.5 (in 10% slurry)
Melting point:	> 1700 °C at 1013 hPa
Boiling point:	> 1700 °C at 1013 hPa
Flash point:	Not combustible
Evaporation rate:	Not applicable
Flammability (solid, gas):	Not flammable
Upper/lower flammability or explosive limits:	Not available.
Vapour pressure:	Not applicable
Relative density:	1.9 - 2.2
Water solubility:	15 - 68 mg SiO ₂ /L (20 °C) 76 - 166 mg SiO ₂ /L (37 °C)
Partition coefficient: n-octanol/water:	LogPow < 0.5
Auto-ignition temperature:	Not combustible
Decomposition temperature:	Not combustible
Viscosity:	Not applicable
Explosive properties:	Not explosive
Oxidising properties:	No oxidising properties

9.2 Other information

No data available.

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SECTION 10: Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

Stable under normal conditions of use.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Avoid dust formation.

10.5 Incompatible materials

Strong bases, oxidizers, hydrogen fluoride, fluorine, xenon hexafluoride, oxygen difluoride, and chlorine trifluoride. Substance can explode when wet and heated with magnesium.

10.6 Hazardous decomposition products

Oxides of carbon and silicon may be formed when heated to decomposition.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity	Oral, LD ₅₀ :	>3100 – >20000 mg/kg
	Inhalation, LC ₅₀ :	No data available.
	Dermal, LD ₅₀ :	>5000 mg/kg

Skin corrosion/irritation: Not irritating to skin, but may produce skin dryness following prolonged and repeated exposure due to the desiccative and defatting property of amorphous silica.

Serious eye damage/irritation: Slight transient irritation to the eye conjunctivae that occurred in experiments is not relevant for classification.

Respiratory or skin sensitization: No experimental animal data are available. Given the structure and physico-chemical properties and abundance of silicon dioxide in nature, synthetic amorphous silica is not expected to cause skin or respiratory sensitisation.

Germ cell mutagenicity: No mutagenic or clastogenic activity either in vitro or in vivo in standard test systems.

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Carcinogenicity:	Based on the negative results after long-term oral administration of synthetic amorphous silica (up to 5 % in the diet given to rats and mice), there is no evidence of a carcinogenic potential arising from ingestion of synthetic amorphous silica.
Reproductive toxicity:	Based on the weight of evidence, prolonged exposure to synthetic amorphous silica, applied before and during pregnancy at high doses, is not expected to produce harmful effects on the reproductive performance or embryonic/foetal development in experimental animals.
STOT-single exposure:	No information available.
STOT-repeated exposure:	No information available.
Aspiration hazard:	No information available.

SECTION 12: Ecological information

12.1 Toxicity

This material is not expected to be toxic to aquatic life.

12.2 Persistence and degradability

Silicon dioxide is an inorganic, stable /inert compound which is not biologically transformed.

It is not photodegradable in air, water and soil.

12.3 Bioaccumulative potential

Silicas do not bioaccumulate, however, they appear as complex silicate minerals in soils and sediments, as the oxide (silica, SiO₂) in crystalline form in rocks, soils and sand, and as biogenic silica in organisms such as diatoms, radiolarians or silicoflagellates and in plants such as grass, rushes, rice or sugar cane.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

The substance is neither a PBT nor a vPvB substance.

12.6 Other adverse effects

No identifiable hazard potential for the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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Waste from this product may be disposed of in sanitary landfill and local regulations permit. Care should be taken to avoid creation of dust during disposal operations.

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing or use contamination of this product may change the waste management options. Local disposal regulations may differ from state disposal regulations.

Dispose of container and unused contents in accordance with state and local requirements.

SECTION 14: Transport information

14.1 UN Number	Not regulated as dangerous goods
14.2 UN proper shipping name	Not regulated as dangerous goods
14.3 Transport hazard class(es)	Not regulated as dangerous goods
14.4 Packing group	Not regulated as dangerous goods
14.5 Environmental hazards	Not regulated as marine pollutant
14.6 Special precautions for user	No information available
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	No information available

SECTION 15: Regulatory information

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

EU regulation:

Authorisations: Not applicable.

Restrictions on use: Not applicable.

EINECS: Listed

Other chemical regulation:

CAS No.	USA TSCA	Canada DSL	Australia AICS	Korea ECL	Japan ENCS	China IECSC
7631-86-9	Listed	Listed	Listed	Listed	Listed	Listed

Remark: The above-mentioned search results are based on the Non-Confidential Inventory.

15.2 Chemical Safety Assessment

Chemical Safety Assessment has been carried out for this product.

SECTION 16: Other information

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16.1 Revision Information

Date of the previous revision: Not applicable.

Date of this revision: 08/08/2013.

Revision summary: The first new SDS

16.2 Abbreviations and acronyms

- CLP:** EU regulation (EC) No 1272/2008 on classification, labelling and packaging of chemical substances and mixtures.
- CAS:** Chemical Abstracts Service (division of the American Chemical Society).
- EINECS:** European Inventory of Existing Commercial Chemical Substances.
- TSCA:** Toxic Substances Control Act, The American chemical inventory.
- DSL:** Domestic Substances List, The Canadian chemical inventory.
- AICS:** The Australian Inventory of Chemical Substances.
- ECL:** Existing Chemicals List, the Korean chemical inventory.
- ENCS:** Japanese Existing and New Chemical Substances.
- IECSC:** Inventory of existing chemical substances in China.

16.3 Key literature references and sources for data

CHEMICAL SAFETY REPORT for the Synthetic Amorphous Silica

16.4 Relevant R-phrases/H-statements

Not applicable. This product is not classified as hazardous substance.

16.5 Training advice

Provide adequate information, instruction and training for operators.

16.6 Declare to reader

The information in this SDS is provided all the relevant data fully and truly. However, the information is provided without any warranty on their absolute extensiveness and accuracy. This SDS was prepared to provide safety preventive measures for the users who have got professional training. The personal user who obtained this SDS should make independent judgment for the applicability of this SDS under special conditions. In these special cases, we do not assume responsibility for the damage. According to REACH Article 31(5), the SDS shall be supplied in an official language of the Member State(s) where the substance or mixture is placed on the market, unless the recipient Member State(s) concerned provide otherwise. It should also be noted that this SDS is applicable to the countries with English as an official language.

----- End of the SDS -----