

## 1 Identification

### Product identifier

**Product name:** Silica gel, wide pore

**Stock number:** 42726

**CAS Number:**

63231-67-4

**EC number:**

231-545-4

**Relevant identified uses of the substance or mixture and uses advised against.**

**Identified use:** SU24 Scientific research and development

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

#### Manufacturer/Supplier:

Alfa Aesar

Thermo Fisher Scientific Chemicals, Inc.

30 Bond Street

Ward Hill, MA 01835-8099

Tel: 800-343-0660

Fax: 800-322-4757

Email: tech@alfa.com

www.alfa.com

**Information Department:** Health, Safety and Environmental Department

#### Emergency telephone number:

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

## 2 Hazard(s) identification

### Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)



GHS08 Health hazard

STOT RE 2 H373 May cause damage to the lung and the immune system through prolonged or repeated exposure. Route of exposure: Inhalative.

**Hazards not otherwise classified** No information known.

### Label elements

**GHS label elements** The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

### Hazard pictograms



GHS08

### Signal word

Warning

### Hazard statements

H373 May cause damage to the lung and the immune system through prolonged or repeated exposure. Route of exposure: Inhalative.

### Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P314 Get medical advice/attention if you feel unwell.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

### WHMIS classification

D2A - Very toxic material causing other toxic effects



### Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH 1 Health (acute effects) = 1

FIRE 0 Flammability = 0

REACTIVITY 0 Physical Hazard = 0

### Other hazards

### Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

## 3 Composition/information on ingredients

### Chemical characterization: Substances

#### CAS# Description:

63231-67-4 Silica gel, wide pore

#### Identification number(s):

EC number: 231-545-4

## 4 First-aid measures

### Description of first aid measures

#### After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

#### After skin contact

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

**After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing** Seek medical treatment.

### Information for doctor

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

Coughing

Breathing difficulty

**Product name: Silica gel, wide pore**

**Indication of any immediate medical attention and special treatment needed** No further relevant information available.

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## 5 Fire-fighting measures

### Extinguishing media

**Suitable extinguishing agents** Product is not flammable. Use fire-fighting measures that suit the surrounding fire.

### Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Silicon oxide

### Advice for firefighters

### Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

## 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

**Environmental precautions:** Do not allow material to be released to the environment without proper governmental permits.

**Methods and material for containment and cleaning up:** Dispose of contaminated material as waste according to section 13.

**Prevention of secondary hazards:** No special measures required.

### Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

### Handling

#### Precautions for safe handling

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

**Information about protection against explosions and fires:** The product is not flammable

### 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:** Not required.

#### Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

**Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

### Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

### Control parameters

#### Components with limit values that require monitoring at the workplace:

Silica, amorphous-diatomaceous earth

mg/m3

ACGIH TLV 10 (inhalable particulate)

3 (respirable particulate)

Germany TWA 4 (inhalable fraction of the aerosol)

Ireland TWA 1.5

United Kingdom TWA 1.2 (respirable dust)

USA PEL 20 mppcf

Silica, amorphous

mg/m3

Ireland TWA 3 (respirable); 6 (total inhalable)

United Kingdom TWA 2.4 (respirable); 6 (total inhalable)

Silica, amorphous-fused

mg/m3

ACGIH TLV 0.1 (respirable particulate)

Finland TWA 5

Germany TWA 0.3 (respirable fraction of the aerosol)

Ireland TWA 0.1 (respirable)

United Kingdom TWA 0.3 (respirable dust)

Silica, amorphous-fume

mg/m3

ACGIH TLV 2 (respirable particulate)

Germany TWA 0.3 (respirable fraction of the aerosol)

Silica, amorphous-precipitated and gel

mg/m3

ACGIH TLV 10 (inhalable particulate)

Germany TWA 4 (inhalable fraction of the aerosol)

USA PEL 20 mppcf

Silica, crystalline-quartz

mg/m3

ACGIH TLV 0.1

Austria MAK 0.15

Belgium TWA 0.1

Finland TWA 0.2

France VME 10/(X+2)

Germany MAK 0.15

Korea TLV 0.1

Netherlands MAC-TGG 0.075

Norway TWA 0.3 (total dust)

0.1 (resp. dust)

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USA

**Product name: Silica gel, wide pore**

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Russia 14-STEL  
Sweden NGV 0.1 (resp. dust)  
Switzerland MAK-W 0.15  
United Kingdom TWA 0.3 (respirable)  
USA PEL 10/(% resp. SiO<sub>2</sub>+2)  
30/(% SiO<sub>2</sub>+2) (total sust)

Silica, crystalline-tridymite and cristobalite mg/m<sup>3</sup>  
ACGIH TLV 0.05 (respirable particulate)  
Belgium TWA 0.05  
Denmark TWA 0.05  
Finland TWA 0.1  
France TWA 10  
Germany TWA 0.15 (respirable fraction of the aerosol)  
Ireland TWA 0.4 (respirable)  
Netherlands TWA 0.075 (respirable)  
Sweden TWA 0.05  
Switzerland TWA 0.15  
USA PEL 0.5 (value calculated for quartz-respirable dust)

Silica, crystalline-tripoli  
mg/m<sup>3</sup>

ACGIH TLV 0.1 (of contained respirable quartz)  
Belgium TWA 0.1  
Germany TWA 0.15 (respirable fraction of the aerosol)  
Ireland TWA 0.4 (respirable)  
USA PEL See quartz

**Additional information:** No data

**Exposure controls****Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Maintain an ergonomically appropriate working environment.

**Breathing equipment:** Use suitable respirator when high concentrations are present.

**Protection of hands:**

Impervious gloves

Check protective gloves prior to each use for their proper condition.

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

**Eye protection:** Safety glasses

**Body protection:** Protective work clothing.

**9 Physical and chemical properties****Information on basic physical and chemical properties****General Information****Appearance:**

**Form:** Coarse powder  
**Color:** White  
**Odor:** Odorless  
**Odor threshold:** Not determined.

**pH-value:** Not applicable.

**Change in condition**

**Melting point/Melting range:** Not determined  
**Boiling point/Boiling range:** Not determined  
**Sublimation temperature / start:** Not determined

**Flash point:** Not applicable  
**Flammability (solid, gaseous)** Not determined.  
**Ignition temperature:** Not determined  
**Decomposition temperature:** Not determined  
**Auto igniting:** Not determined.

**Danger of explosion:** Product does not present an explosion hazard.

**Explosion limits:**

**Lower:** Not determined  
**Upper:** Not determined  
**Vapor pressure:** Not applicable.  
**Density:** Not determined  
**Relative density** Not determined.  
**Vapor density** Not applicable.  
**Evaporation rate** Not applicable.

**Solubility in / Miscibility with**

**Water:** Insoluble  
**Partition coefficient (n-octanol/water):** Not determined.  
**Viscosity:**  
**dynamic:** Not applicable.  
**kinematic:** Not applicable.  
**Other information** No further relevant information available.

**10 Stability and reactivity**

**Reactivity** No information known.

**Chemical stability** Stable under recommended storage conditions.

**Thermal decomposition / conditions to be avoided:** Decomposition will not occur if used and stored according to specifications.

**Possibility of hazardous reactions** No dangerous reactions known

**Conditions to avoid** No further relevant information available.

**Incompatible materials:** Hydrogen fluoride (HF)

**Hazardous decomposition products:**

No decomposition products known.

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- USA -

**Product name: Silica gel, wide pore**

Silicon oxide

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## 11 Toxicological information

### Information on toxicological effects

**Acute toxicity:** No effects known.

**LD/LC50 values that are relevant for classification:** No data

**Skin irritation or corrosion:** Causes mild irritant effect.

**Eye irritation or corrosion:** May cause irritation

**Sensitization:** No sensitizing effects known.

**Germ cell mutagenicity:** No effects known.

**Carcinogenicity:** IARC-3: Not classifiable as to carcinogenicity to humans.

**Reproductive toxicity:** No effects known.

**Specific target organ system toxicity - repeated exposure:**

May cause damage to the lung and the immune system through prolonged or repeated exposure. Route of exposure: Inhalative.

**Specific target organ system toxicity - single exposure:** No effects known.

**Aspiration hazard:** No effects known.

### Other information (about experimental toxicology):

Tumorigenic effects have been observed on tests with laboratory animals.

Reproductive effects have been observed on tests with laboratory animals.

Carcinogenic effects have been observed on tests with laboratory animals.

**Subacute to chronic toxicity:** The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.

### Subacute to chronic toxicity:

Prolonged inhalation of silica may cause silicosis, the formation of adhesions in the lungs progressing to the formation of a continuous mass of fibrous tissue. If the disease continues, death may occur. Tuberculosis is often found in people with silicosis. Some forms of silica are more fibrogenic than others. Some forms of crystalline silica have shown carcinogenic, tumorigenic and neoplastic effects in laboratory animals. Amorphous silica is less harmful by inhalation than crystalline forms. Amorphous silica may, however, contain small amounts of crystalline silica.

### Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

IARC-1: Carcinogenic to humans: sufficient evidence of carcinogenicity.

NTP-R: Reasonably anticipated to be a carcinogen: limited evidence from studies in humans or sufficient evidence from studies in experimental animals.

## 12 Ecological information

### Toxicity

**Aquatic toxicity:** No further relevant information available.

**Persistence and degradability** No further relevant information available.

**Bioaccumulative potential** No further relevant information available.

**Mobility in soil** No further relevant information available.

### Additional ecological information:

#### General notes:

Do not allow material to be released to the environment without proper governmental permits.

Avoid transfer into the environment.

### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

**Other adverse effects** No further relevant information available.

## 13 Disposal considerations

### Waste treatment methods

**Recommendation** Consult state, local or national regulations to ensure proper disposal.

### Uncleaned packagings:

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

## 14 Transport information

Not a hazardous material for transportation.

### UN-Number

DOT, IMDG, IATA

None

### UN proper shipping name

DOT, IMDG, IATA

None

### Transport hazard class(es)

DOT, ADR, IMDG, IATA

Class

None

### Packing group

DOT, 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.

DOT

Marine Pollutant (DOT):

No

## 15 Regulatory information

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

**GHS label elements** The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

### Hazard pictograms



GHS08

### Signal word

Warning

### Hazard statements

H373 May cause damage to the lung and the immune system through prolonged or repeated exposure. Route of exposure: Inhalative.

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USA

**Product name: Silica gel, wide pore**

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**Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P314 Get medical advice/attention if you feel unwell.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**National regulations**

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Domestic Substances List (DSL).

**SARA Section 313 (specific toxic chemical listings)** Substance is not listed.

**California Proposition 65**

**Prop 65 - Chemicals known to cause cancer** Substance is not listed.

**Prop 65 - Developmental toxicity** Substance is not listed.

**Prop 65 - Developmental toxicity, female** Substance is not listed.

**Prop 65 - Developmental toxicity, male** Substance is not listed.

**Information about limitation of use:** For use only by technically qualified individuals.

**Other regulations, limitations and prohibitive regulations**

**Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.** Substance is not listed.

**The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.**

Substance is not listed.

**Annex XIV of the REACH Regulations (requiring Authorisation for use)** Substance is not listed.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**16 Other information**

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

**Department issuing SDS:** Global Marketing Department

**Date of preparation / last revision** 11/24/2015 / -

**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

vPvB: very Persistent and very Bioaccumulative

ACGIH: American Conference of Governmental Industrial Hygienists (USA)

OSHA: Occupational Safety and Health Administration (USA)

NTP: National Toxicology Program (USA)

IARC: International Agency for Research on Cancer

EPA: Environmental Protection Agency (USA)