

Safety Data Sheet

ZEOprep Silicagel

Classification acc. to 29 CFR 1910.1200

Version number: GHS 6.0
Replaces version of: 2023-02-06 (GHS 5)

Revision: 2023-02-07

SECTION 1: Identification

1.1 Product identifier

| | |
|---------------------------------|---|
| Identification of the substance | ZEOprep Silicagel |
| CAS number | 7631-86-9 |
| Alternative name(s) | Silicon dioxide, ZEOprep 60, ZEOprep 90, Silicagel 490, Silicagel 560 |

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

| | |
|--------------------------|---------------------|
| Relevant identified uses | general use |
| HS code | Silica gel 2811.22. |

1.3 Details of the supplier of the safety data sheet

| | |
|--|---|
| Zeochem AG Joweid 5, CH-8630 Rütli Switzerland | Telephone: +41 44 922 93 93 e-Mail: info@zeochem.com / info@zeochem.ch Website: https://www.zeochem.com |
|--|---|

1.4 Emergency telephone number

| Poison center | | |
|---------------|--------------------------------------|-------------------------------------|
| Country | Name | Telephone |
| Switzerland | Toxzentrum Zürich / Tox. Info Suisse | +41 44 251 51 51 / CH: 145 - 24h/7d |
| United States | CHEMTREC USA | +1 800 424 9300 - 24h/7d |

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)
This substance does not meet the criteria for classification.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word not required

2.2.1.2 Pictograms not required

2.3 Other hazards

There is no additional information.

Hazards not otherwise classified

May be harmful in contact with skin (GHS category 5: acutely toxic - dermal).
May be harmful if inhaled (GHS category 5: acutely toxic - inhalation).

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0,1\%$.

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SECTION 3: Composition/information on ingredients**3.1 Substances**

| | |
|-------------------|-------------------|
| Name of substance | ZEOprep Silicagel |
| Identifiers | |
| CAS No | 7631-86-9 |
| Purity | ≥90 % |

Impurities and additives, classification acc. to GHS

| Name of substance | CAS No | Wt% | Classification acc. to GHS |
|-------------------|-----------|--------|----------------------------|
| water | 7732-18-5 | 1 – 10 | |

| | |
|-------------------|-------------------|
| Molecular formula | O ₂ Si |
| Molar mass | 60.1 g/mol |

For full text of abbreviations: see SECTION 16.

SECTION 4: First-aid measures**4.1 Description of first-aid measures**

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Brush off loose particles from skin. Rinse skin with water/shower.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Fire-fighting measures**5.1 Extinguishing media**

Suitable extinguishing media

Water, Foam, ABC-powder

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture**5.3 Advice for firefighters**

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains, Take up mechanically

Advice on how to clean up a spill

Take up mechanically.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Recommendations

Store in a dry place.

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Take precautionary measures against static discharge. Use only in well-ventilated areas. Ground/bond container and receiving equipment.

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- Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Explosive atmospheres

Removal of dust deposits.

- Ventilation requirements

Use local and general ventilation.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

| Occupational exposure limit values (Workplace Exposure Limits) | | | | | | | | | | | |
|--|--|-----------|------------|-----------|--------------------------|------------|---------------------------|-----------------|--------------------------------|-----------------|------------------|
| Country | Name of agent | CAS No | Identifier | TWA [ppm] | TWA [mg/m ³] | STEL [ppm] | STEL [mg/m ³] | Ceiling-C [ppm] | Ceiling-C [mg/m ³] | Notation | Source |
| US | Particulates not otherwise regulated | | PEL (CA) | | 10 | | | | | dust | Cal/ OSHA PEL |
| US | Particulates not otherwise regulated | | PEL (CA) | | 5 | | | | | r | Cal/ OSHA PEL |
| US | particulates not otherwise classified | | REL | | | | | | | appx-D | NIOSH REL |
| US | particulates not otherwise classified (PNOC) | | PEL | 1,766 | 15 | | | | | partml, i, dust | 29 CFR 1910.1000 |
| US | particulates not otherwise classified (PNOC) | | PEL | 530 | 5 | | | | | partml, r, dust | 29 CFR 1910.1000 |
| US | silica, amorphous | 7631-86-9 | REL | | 6 (10 h) | | | | | | NIOSH REL |

Notation

appx-D

Ceiling-C

dust

i

partml

r

STEL

see Appendix D - Substances with No Established RELS

ceiling value is a limit value above which exposure should not occur

as dust

inhalable fraction

particles/ml

respirable fraction

short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

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Notation

TWA time-weighted average (long-term exposure limit); measured or calculated in relation to a reference period of 8 hours
time-weighted average (unless otherwise specified)**8.2 Exposure controls**

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear protective gloves.

- Type of material

Nitrile

IIR: isobutene-isoprene (butyl) rubber

- Breakthrough times of the glove material

>30 minutes (permeation: level 2)

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.
Wash hands thoroughly after handling.

Respiratory protection

Particulate filter device (EN 143).

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****Appearance**

| | |
|----------------|------------------------|
| Physical state | solid |
| Color | white |
| Particle size | 15 – 500 µm 0.5 – 8 mm |
| Odor | odorless |

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Other safety parameters

| | |
|---|-----------------------------------|
| pH (value) | not applicable |
| Melting point/freezing point | >800 K at 1,013 hPa |
| Initial boiling point and boiling range | not determined |
| Flash point | not applicable |
| Evaporation rate | not determined |
| Flammability (solid, gas) | non-combustible |
| Explosion limits of dust clouds | not determined |
| Vapor pressure | not determined |
| Density | 2.16 kg/m ³ at 20 °C |
| Vapor density | this information is not available |
| Bulk density | 300 – 600 g/ml |

Solubility(ies)

| | |
|--------------------|--------------------|
| - Water solubility | ≤124 mg/l at 20 °C |
|--------------------|--------------------|

Partition coefficient

| | |
|-----------------------------|-----------------------------------|
| - n-octanol/water (log KOW) | this information is not available |
|-----------------------------|-----------------------------------|

| | |
|---------------------------|-----------------------------|
| Auto-ignition temperature | 725 °C (ECHA) |
| Viscosity | not relevant (solid matter) |
| Explosive properties | none |
| Oxidizing properties | none |

| | |
|------------------------------|------------------------------------|
| 9.2 Other information | there is no additional information |
|------------------------------|------------------------------------|

SECTION 10: Stability and reactivity**10.1 Reactivity**

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)**

This substance does not meet the criteria for classification.

Acute toxicity

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4: May be harmful in contact with skin or if inhaled.

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

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IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

| Name of substance | CAS No | Classification | Number |
|-------------------|-----------|----------------|--------|
| ZEOprep Silicagel | 7631-86-9 | 3 | |

Legend

3 Not classifiable as to carcinogenicity in humans

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0,1\%$.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment-relevant information

Recycling/reclamation of other inorganic materials.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

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Waste treatment of containers/packages

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

| | |
|--|---|
| 14.1 UN number | not subject to transport regulations |
| 14.2 UN proper shipping name | not relevant |
| 14.3 Transport hazard class(es) | none |
| 14.4 Packing group | not assigned |
| 14.5 Environmental hazards | non-environmentally hazardous acc. to the dangerous goods regulations |
| 14.6 Special precautions for user | |
| There is no additional information. | |
| 14.7 Transport in bulk according to IMO instruments | |
| The cargo is not intended to be carried in bulk. | |

Information for each of the UN Model Regulations**Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information**

Not subject to transport regulations.

International Maritime Dangerous Goods Code (IMDG) - Additional information

Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question**National regulations (United States)****Toxic Substance Control Act (TSCA)**

substance is listed as "ACTIVE"

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

not listed

- Specific Toxic Chemical Listings (EPCRA Section 313)

not listed

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Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)
not listed

Clean Air Act

not listed

Right to Know Hazardous Substance List

- Cleaning Product Right to Know Act Substance List (CA-RTK)
not listed
- Toxic or Hazardous Substance List (MA-TURA)
not listed
- Hazardous Substances List (MN-ERTK)

| Name of substance | CAS No | References | Remarks |
|-------------------|-----------|---------------|---------|
| ZEOprep Silicagel | 7631-86-9 | A, N, O, R, * | |

Legend

- * Substances which are regulated by OSHA as carcinogens; have been categorized by the ACGIH as either "human carcinogens" or "suspect of carcinogenic potential for man"; have been evaluated by the International Agency for Research on Cancer (IARC) and found to be carcinogens or potential carcinogens; or have been listed as a carcinogen or potential carcinogen in the Annual Report on Carcinogens published by the National Toxicology Program (NTP).
- A American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1992-93", available from ACGIH
- N National Institute for Occupational Safety and Health (NIOSH), "Recommendations for Occupational Safety and Health Standards," August 1988, available from NIOSH, Publications Dissemination Office, Division of Standards Development and Technology Transfer
- O Occupational Safety and Health Administration (OSHA), Safety and Health Standards, Code of Federal Regulations, title 29, part 1910, subpart Z, "Toxic and Hazardous Substances, 1990." General information: Minnesota Department of Labor and Industry, Occupational Safety and Health Division
- R International Agency for Research on Cancer (IARC) Monographs on the Evaluation of the Carcinogenic Risks to Humans; Overall Evaluations of Carcinogenicity: An Updating of IARC Monographs Volumes 1 to 42, Supplement 7 (1987). Available from: WHO Publications Centre USA

- Hazardous Substance List (NJ-RTK)
not listed
- Hazardous Substance List (Chapter 323) (PA-RTK)

| Name acc. to inventory | CAS No | Classification |
|------------------------|-----------|----------------|
| SILICA | 7631-86-9 | |

- Hazardous Substance List (RI-RTK)
not listed

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

not listed

Industry or sector specific available guidance(s)**NPCA-HMIS® III**

Hazardous Materials Identification System. American Coatings Association.

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| Category | Rating | Description |
|---------------------|--------|--|
| Chronic | / | none |
| Health | 1 | irritation or minor reversible injury possible |
| Flammability | 0 | material that will not burn under typical fire conditions |
| Physical hazard | 0 | material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive |
| Personal protection | - | |

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

| Category | Degree of hazard | Description |
|----------------|------------------|---|
| Flammability | 0 | material that will not burn under typical fire conditions |
| Health | 1 | material that, under emergency conditions, can cause significant irritation |
| Instability | 0 | material that is normally stable, even under fire conditions |
| Special hazard | | |

National inventories

| Country | Inventory | Status |
|---------|------------|---------------------|
| EU | REACH Reg. | substance is listed |
| US | TSCA | substance is listed |

LegendREACH Reg. REACH registered substances
TSCA Toxic Substance Control Act**15.2 Chemical Safety Assessment**

No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information, including date of preparation or last revision**Key literature references and sources for data**

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.