

## Safety Data Sheet

## ZEObeads Silica gel

Classification acc. to 29 CFR 1910.1200

Version number: GHS 4.0  
Replaces version of: 2023-06-26 (GHS 3)

Revision: 2023-07-18

**SECTION 1: Identification****1.1 Product identifier**

Identification of the substance	<b>ZEObeads Silica gel</b>
CAS number	7631-86-9
Alternative name(s) ZEObeads 50 ZEObeads 100	
Alternative name(s)	ZEObeads 50 ZEObeads 100
Alternative name(s)	ZEObeads 50, ZEObeads 100

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

Relevant identified uses	industrial uses the product is intended for research, analysis and scientific education scientific research and development laboratory and analytical use product and process oriented research and development
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: <a href="mailto:info@zeochem.com">info@zeochem.com</a> Website: <a href="https://www.zeochem.com">https://www.zeochem.com</a>
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**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.

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## 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  $\geq 0.1\%$ .

## SECTION 3: Composition/information on ingredients

## 3.1 Substances

Name of substance	ZEObeads Silica gel
Identifiers	
CAS No	7631-86-9
Purity	$\geq 90\%$

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 <sub>2</sub> 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.

- 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/m³]	STEL [ppm]	STEL [mg/m³]	Ceiling-C [ppm]	Ceiling-C [mg/m³]	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

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## Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
US	silica, amorphous	7631-86-9	REL		6 (10 h)						NIOSH REL

## Notation

appx-D	see Appendix D - Substances with No Established RELs
Ceiling-C	ceiling value is a limit value above which exposure should not occur
dust	as dust
i	inhalable fraction
partml	particles/ml
r	respirable fraction
STEL	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)
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

&gt;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	10 – 100 µm
Odor	odorless

**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	not determined
Vapor density	this information is not available
Bulk density	300 – 600 g/l
Relative density	information on this property is not available

**Solubility(ies)**

- Water solubility	≤124 mg/l at 20 °C
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**Partition coefficient**

- n-octanol/water (log KOW)	this information is not available
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Auto-ignition temperature	725 °C (ECHA)
Viscosity	not relevant (solid matter)
Explosive properties	none
Oxidizing properties	none
<b>9.2 Other information</b>	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.

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**Germ cell mutagenicity**

Shall not be classified as germ cell mutagenic.

**Carcinogenicity**

Shall not be classified as carcinogenic.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans			
Name of substance	CAS No	Classification	Number
ZEObeads Silica gel	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.

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**

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

**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
ZEObeads Silica gel	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

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## - 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.

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

**Legend**REACH Reg. REACH registered substances  
TSCA Toxic Substance Control Act

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**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****Indication of changes (revised safety data sheet)**

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
1.2	Relevant identified uses: general use	Relevant identified uses: industrial uses the product is intended for research, analysis and scientific education scientific research and development laboratory and analytical use product and process oriented research and development	yes
1.3	Details of the supplier of the safety data sheet: Zeochem AG Joweid 5, CH-8630 Rüti Switzerland  Telephone: +41 44 922 93 93 e-Mail: info@zeochem.com / info@zeochem.ch Website: https://www.zeochem.com	Details of the supplier of the safety data sheet: Zeochem AG Joweid 5, CH-8630 Rüti Switzerland  Telephone: +41 44 922 93 93 e-Mail: info@zeochem.com Website: https://www.zeochem.com	yes

**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.