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Safety data sheet

According to REACH Regulation (EC) 1907/2006 including amendment (EU) 2020/878
Version: 1.6 | Revision date: 03.07.2025

Aerogel Granulat

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

1.1 Product identifier

Product form: Mixture
Product code:Synonyms: AGITEC SILICA AEROGEL PARTICLE
SICLA PL IB
SiO2 aerogel material; Silica aerogel particle; KSL6PC;
Silica aerogel powder; KSL6PD

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

Use of the mixture: High-quality insulation material
Uses advised against: No information available

1.3 Details of the supplier of the safety data sheet

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Königstraße 27
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1.4 Emergency telephone number

International: +41 44 316 63 73

Section 2: Hazards identification

2.1 Classification of the substance or mixture

Classification of the material according to GHS and EU regulations: STOT RE2, H373, EUH066. Possible health effects:

Skin Repeated contact may cause dry or cracked skin.

Eyes Dust exposure may cause irritation and dryness of the eyes.

Inhalation Inhaling dust may cause respiratory tract irritation.

Ingestion Not relevant.

Carcinogenicity No known carcinogenicity.

Specific target organ toxicity Repeated exposure may damage lung tissue or impair lung function.

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]
Signal word (CLP): -
Hazard statements (CLP): -
Precautionary statements (CLP): -
EUH statements: -

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Section 2: Hazards identification

2.3 Other hazards

Do not expose to temperatures above 500 °C. May cause mechanical irritation. Dust may irritate the respiratory tract.

Section 3: Composition/information on ingredients

3.2 Mixtures

Chemical name	Product identifier	%
Silicon dioxide	CAS 7631-86-9	> 90 %
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-	CAS 68909-20-6	< 10 %

Section 4: First-aid measures

4.1 Description of first aid measures

Inhalation: If irritation or symptoms occur or persist, seek medical attention.

Skin contact: Wash thoroughly with water and soap. If irritation occurs, seek medical advice.

Eye contact: Rinse eyes thoroughly with plenty of water for at least 15 minutes. If discomfort or other symptoms persist, consult a physician.

Ingestion: Do not induce vomiting, seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

See section 11 for further information on toxicity.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Section 5: Firefighting measures

5.1 Extinguishing media

Use fire-fighting measures appropriate to local conditions and the surrounding environment.
Carbon dioxide (CO_2). Foam. Dry extinguishing agent. Water.

5.2 Special hazards arising from the substance or mixture

Fire hazard: The product is not flammable.
Explosion hazard: Not explosive.
Hazardous decomposition products: Not known.

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Section 5: Firefighting measures

Section 5.3: Advice for Firefighters

Flash point:	Not applicable
Explosion limits in air – lower (g/m³):	Not known
Minimum ignition energy:	Not known
Burning velocity:	Not known
Special protective equipment:	Wear appropriate firefighting gear to avoid inhalation of gases and smoke near the fire.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure sufficient ventilation and avoid dust clouds. Use personal protection as described in section 8.

6.2 Environmental precautions

Contain spilled product on land if possible. The product is insoluble and floats on the water surface. Notify local authorities if significant spilled quantities cannot be contained. See section 12 for additional environmental information.

6.3 Methods and materials for containment and cleaning up

Avoid further leakage or spillage if safe to do so. Vacuum immediately. A vacuum cleaner with a high-efficiency particulate air (HEPA) filter is recommended. Do not use brooms or compressed air to avoid dust dispersion. Dry sweeping is not recommended. See section 13.

6.4 Reference to other sections

See section 8 and 13 for further information.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Avoid contact with eyes and skin. Avoid dust formation. Do not inhale dust. Ensure adequate ventilation and extraction at processing machines and in areas where dust may form. Do not use brooms or compressed air to prevent dust dispersion. Take measures against electrostatic charges. All metal parts of mixing and processing machines must be grounded. Before transfer operations, ensure that all equipment is properly grounded. Fine dust can penetrate electrical devices and cause short circuits if they are not completely sealed.
Handle with good workplace hygiene and safety practices.

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Section 7: Handling and Storage

7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry and well-ventilated place. Do not store with volatile chemicals, as these may be absorbed by the product. Store at ambient conditions. Store in properly labeled containers.

7.3 Specific end uses

No exposure scenario has been developed under paragraph 14.4 of the REACH Regulation, as the substance is not hazardous.

Section 8: Exposure controls / Personal protection

8.1. Parameters to be monitored

Amorphous silica The legal occupational exposure limits are listed under general silica (CAS RN 7631-86-9)	Australia:	2 mg/m³, TWA, respirable
	Austria (MAK):	4 mg/m³, TWA, inhalable dust fraction
	Finland:	5 mg/m³
	Germany (TRGS 900):	4 mg/m³, TWA, inhalable dust fraction
	India:	10 mg/m³, TWA
	Ireland:	2.4 mg/m³, TWA respirable dust
	Norway:	1.5 mg/m³, TWA respirable dust
	Switzerland:	4 mg/m³, TWA
	UK (WEL):	6 mg/m³, TWA, 2.4 mg/m³, TWA, respirable dust
	US OSHA PEL:	6 mg/m³
Dust or particles without further specification:	US ACGIH:	10 mg/m³, TWA, inhalable 3 mg/m³, TWA, respirable
	Belgium:	10 mg/m³, TWA, inhalable 3 mg/m³, TWA, respirable
	China:	8 mg/m³, TWA 10 mg/m³, STEL
	Italy:	10 mg/m³, TWA, inhalable 3 mg/m³, TWA, respirable
	Malaysia:	10 mg/m³, TWA, inhalable 3 mg/m³, TWA, respirable
	Spain:	10 mg/m³, VLA, inhalable 3 mg/m³, VLA, R respirable
	France:	10 mg/m³, TWA inhalable 5 mg/m³, TWA respirable

MAK: Maximum Workplace Concentration
OEL: Occupational Exposure Limit
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value
TRGS: Technical Rules for Hazardous Substances

TWA: Time Weighted Average
US ACGIH: United States American Conference of Governmental Industrial Hygienists
US OSHA: United States Occupational Health and Safety Administration
VLA: Ambient Limit Value (Environmental Limit)
WEL: Workplace Exposure Limit

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Section 8: Exposure controls / Personal protection

8.2 Limitation and Monitoring of Exposure

Technical control measures:	Ensure adequate room ventilation to stay below permissible workplace exposure limits. Provide local exhaust ventilation at machines and areas where dust may form. Ensure that eyewash stations and safety showers are available near the work area.
Personal protective equipment	
Eye/face protection:	Wear safety goggles with side shields (or safety glasses).
Hand protection:	Wear suitable protective gloves. Apply protective skin cream before handling the product.
Skin and body protection:	Wear appropriate protective clothing while working. Wash contaminated clothing before reusing it. Do not wear contaminated work clothing outside the workplace.
Respiratory protection:	If local ventilation is insufficient, an approved respirator may be required.
General hygiene guidelines:	Handle using good industrial hygiene and safety practices.
Environmental exposure limitation and monitoring	In accordance with all applicable local laws and dust-related regulatory requirements.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance / physical form:	White, solid powder
Odour:	None
Relative density:	40 - 60 kg/m^3
Decomposition temperature:	Above 400 °C
Melting/boiling point:	1'700 °C / 2'230 °C
MAIT (ASTM E1491-06):	Dust clouds of this material do not ignite spontaneously below 510 °C.
Minimum ignition energy (MIE):	According to ASTM E2019-03, this powder has a MIE > 3000 mJ.
Ignition temperature of dust layers on hot surfaces:	According to ASTM E2021-15, this powder has a HITL value (« Hot Surface Ignition Temperature of Dust Layers ») of: 300 °C < HITL < 310 °C.
Explosivity:	According to ISO/IEC 80079-20-2:2016, the powder was tested and certified for explosivity and was classified as explosive for the parameters C = 500 g/m^3 and pex = 0.3965 MPa.

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Section 9: Physical and Chemical Properties

9.2. Other Information

No further information available

Section 10: Stability and Reactivity

10.1 Reactivity

Not reactive under normal conditions of use.

10.2 Chemical Stability

Stable.

10.3 Possibility of Hazardous Reactions

None known.

10.4 Conditions to Avoid

Flames and prolonged exposure above the recommended use temperature should be avoided.

10.5 Incompatible Materials

None known.

10.6 Hazardous Decomposition Products

No hazardous decomposition products are formed under normal storage and usage conditions.

Section 11: Toxicological Information

11.1 Information on hazard classes as defined in Regulation (EC) No. 1272/2008

LD50 oral	> 5000 mg/kg (rat). During the observation period, no deaths or signs of toxicity were observed after a single oral administration of the substance, OECD 423.
LD50 dermal	No data available for the product itself. Synthetic amorphous silica: > 2000 mg/kg (rabbit). Very slight, transient erythema in one animal. No signs of systemic or organic toxicity (OECD 402).
LC50 inhalation	No suitable test method available due to the physical properties.
Skin corrosion/irritation	Primary irritation index = 0.0 @ 24 h. Not classified as irritant (OECD 404).
Severity	Not classified as irritant in studies with rabbits.

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Section 11: Toxicological Information

11.1 Information on hazard classes as defined in Regulation (EC) No. 1272/2008

Serious eye damage / Eye irritation

(OECD 405). High dust concentrations may cause mechanical irritation.

Respiratory or skin sensitisation

Not sensitising. A delayed contact hypersensitivity study was performed on guinea pigs using the Bühler method.

Germ cell mutagenicity

Not mutagenic in the Ames test. Negative in the chromosomal aberration test in CHO ovary cells (Chinese hamster).

Carcinogenicity

No data for the product itself.
Synthetic amorphous silica: no evidence of carcinogenicity after repeated oral or inhalation exposure in various animal species. Epidemiological studies likewise show no evidence of carcinogenicity in workers handling amorphous silica.

Reproductive toxicity

In toxicity studies in animals, no effects on reproductive organs or fetal development were reported.

STOT - single exposure

After single oral, inhalation or dermal exposure, no specific target organ toxicity is expected.

STOT - repeated exposure

No data for the product itself.

Treated synthetic amorphous silica: repeated dose toxicity: oral (rat), 28 days, diet, no significant treatment-related harmful effects at tested doses. No observed adverse effect level (NOAEL) about 500 mg/kg/day.

Synthetic amorphous silica: repeated dose toxicity: oral (rat), 2 weeks to 6 months, no significant treatment-related harmful effects at doses up to 8% silica in diet.

Repeated dose toxicity: inhalation (rat), 13 weeks, lowest observed effect level (LOEL) = 1.3 mg/m³ based on mild, reversible lung effects.

Repeated dose toxicity: inhalation (rat), 90 days, LOEL = 1 mg/m³ based on reversible effects on lungs and nasal cavity. Toxicity with repeated administration using SAS 400 m²/g: inhalation (rat), 90 days, fully reversible inflammation linked to clearance processes after recovery phase. NOAEC (lung) based on histopathology and inflammation markers: 5 mg/m³. Based on available data, a STOT-RE classification is not justified.

Aspiration hazard

Based on industry experience and available data, no aspiration hazard is expected.

11.2. Information on other hazards

Endocrine disrupting properties
The substance/mixture contains no components classified as endocrine disruptors according to REACH Article 57(f) or Delegated Regulation (EU) 2017/2100 or (EU) 2018/605, in amounts of 0.1% or more.

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Section 12: Ecological Information

12.1 Toxicity

No data are available for the product itself.
Synthetic amorphous silica: Fish (Brachydanio rerio) LC50 (96 h): > 10,000 mg/l; (method: OECD 203). No acute toxicity to daphnia; EL and EL50 from > 1,000 to 10,000 mg/L (OECD 202).

12.2 Persistence and degradability

The methods for assessing biodegradability do not apply to inorganic substances.

12.3 Bioaccumulative potential

Not expected due to the physical and chemical properties of the product.

12.4 Mobility in soil

Migration not expected.

12.5 Results of PBT and vPvB assessment

This substance is not considered (very) persistent, (very) bioaccumulative and toxic (PBT / vPvB).

12.6 Endocrine disrupting properties

The substance/mixture does not contain any components considered to have endocrine-disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 in concentrations of 0.1 % or higher.

12.7 Other adverse effects

No information available

Section 13: Disposal Considerations

13.1 Waste treatment methods

Waste from residues/unused products
Dispose of in accordance with applicable federal, state and local regulations. Dispose of waste according to environmental regulations.

Contaminated packaging
Dispose of contents/container in accordance with local, regional, national and international regulations.

Waste code/designations according to EWC/AVV
Not applicable.

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Section 14: Transport Information

14.1 UN number or ID number

Not a hazardous material under transport regulations

14.2 UN proper shipping name

Not regulated

14.3 Transport hazard classes

Not regulated

14.4 Packaging group

Not regulated

14.5 Environmental hazards

Not regulated

14.6 Special precautions for user

Road transport:	Not regulated	Sea transport:	Not regulated
Air transport:	Not regulated	Inland waterway transport:	Not regulated
Rail transport:	Not regulated		

14.7 Bulk transport according to IMO instruments

Not applicable

Section 15: Regulatory Information

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

National regulations Germany
Water hazard class (WGK): not hazardous to water (nwg).

Note on Regulation (EC) No. 1907/2006 (REACH)
AGITEC AG is neither a manufacturer nor a supplier of chemical substances or mixtures. Under EC 1907/2006 (REACH), AGITEC AG is considered a downstream user and product manufacturer. For these, the creation of (material) safety data sheets (MSDS) is not required. Information obligations only apply if substances from the SVHC list are included. Since this is not the case for all AGITEC AG products, no safety data sheet exists—in full compliance with the REACH regulation. Therefore, the misleading impression that AGITEC AG products fall under the scope of REACH should be avoided. In case of changes, AGITEC AG will fulfill its obligations and provide information in accordance with REACH without being asked.

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Section 15: Regulatory Information

15.2. Chemical safety assessment

This material has been reviewed against the list of 240 SVHCs “Substance of Very High Concern”, with all assessed substances present at concentrations below 0.1 % (w/w).

Section 16: Other Information

Key literature references and sources of data used in preparing the safety data sheet
NIOSH Pocket Guide to Chemical Hazards, September 2005. “Silica, amorphous”. DHHS (NIOSH) Publication No. 2005-149. National Technical Information Service, Springfield, VA. p. 277.

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