

Potassium silicate, anhydrous: sc-272105



The Power to Question

MATERIAL SAFETY DATA SHEET

1 Identification of substance:

Product Name: Potassium silicate, anhydrous
Catalog Number: sc-272105
Supplier: Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, California 95060
800.457.3801 or 831.457.3800
Emergency: ChemWatch
Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255
(1-800-CHEMCALL) or call +613 9573 3112

2 Hazards identification

Classification of the substance or mixture



GHS07

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.

Label elements

Labelling according to EU guidelines:

Code letter and hazard designation of product:

Xi Irritant

Risk phrases:

36/37/38 Irritating to eyes, respiratory system and skin.

Safety phrases:

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

37 Wear suitable gloves.

Hazard description:

WHMIS classification



Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	1
FIRE	0
REACTIVITY	0

Health (acute effects) = 1

Flammability = 0

Reactivity = 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:

Potassium silicate, anhydrous (CAS# 1312-76-1)

Crystalline silica, quartz (CAS# 14808-60-7)

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 immediate medical advice.

5 Firefighting 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

In case of 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: Ensure adequate ventilation.

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:

Do not store together with oxidizing and acidic materials.

Further information about storage conditions:

Keep container tightly sealed. Store at room temperature.

Store in cool, dry conditions in well sealed containers.

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

Silica, crystalline-tridymite and cristobalite
mg/m³

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/m³

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

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

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.

Avoid contact with the eyes and skin.

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.

Material of gloves

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:	Powder
Formula:	SiO ₂ :K ₂ O 2.5:1 wt%
Weight:	154.28

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.
Vapour density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with Water:	Soluble
Segregation 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

Chemical stability

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

Incompatible materials:

Acids

Oxidizing agents

Hazardous decomposition products: Silicon oxide

11 Toxicological information

Information on toxicological effects

Acute toxicity:

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

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-1: Known to be carcinogenic: sufficient evidence from human studies.

ACGIH A2: Suspected human carcinogen: Agent is carcinogenic in experimental animals at dose levels, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) considered relevant to worker exposure. Available epidemiologic studies are conflicting or insufficient to confirm an increased risk of cancer in exposed humans.

12 Ecological information

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Additional ecological information:

General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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

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.

Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

Not a hazardous material for transportation.

DOT regulations: Hazard class: None
Land transport ADR/RID (cross-border) ADR/RID class: None
Maritime transport IMDG: IMDG Class: None
Marine pollutant: No
Air transport ICAO-TI and IATA-DGR: ICAO/IATA Class: None

Special precautions for user Not applicable.

Transport/Additional information: Not dangerous according to the above specifications.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

15 Regulatory information

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

Product related hazard informations:

Hazard symbols:

Xi Irritant

Risk phrases:

36/37/38 Irritating to eyes, respiratory system and skin.

Safety phrases:

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

37 Wear suitable gloves.

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).

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

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

16 Other information:

The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.