

## Material Safety Data Sheet Potassium Silicate

### Section 1 - Product Identification

Synonym : Potassium metasilicate, Liquid glass.  
Chemical Formula :  $K_2SiO_3$   
Company Identification : Tradeasia International Pte. Limited  
Address : 133 Cecil Street # 12-03 Keck Seng Tower, Singapore  
Tel: +65-6227 6365  
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Email: [contact@chemtradeasia.com](mailto:contact@chemtradeasia.com)  
Recommended use : Agriculture, horticulture - fertilizer, construction industry - a component of solution for fire-retardant wood.

### Section 2 – Hazards Identification

#### 2.1. Classification

Skin Corrosion/Irritation: Category 2

Serious Eye Damage/Eye Irritation: Category 2

#### 2.2. Label elements

##### Symbols/Pictograms



##### Signal Word

Danger

##### Hazard Statements

Causes skin irritation

Causes serious eye irritation

##### Precautionary Statements

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

IF ON SKIN: Wash with plenty of soap and water

If skin irritation occurs: Get medical advice/attention

Take off contaminated clothing and wash before reuse

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention

### Section 3 – Composition/Information on Ingredients

Chemical Name	EC No/CAS No	Purity, %
Potassium Silicate	1312-76-1	<=100

## Section 4 – First-Aid Measures

### 4.1. Description of first aid measures

#### General advice

If symptoms persist, call a physician.

#### Eyes

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

#### Skin

Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

#### Ingestion

Clean your mouth with water and drink plenty of water. Get medical attention if symptoms occur.

#### Inhalation

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

### 4.2. Most important symptoms and effects, both acute and delayed

None reasonably foreseeable.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## Section 5 – Fire Fighting Measures

### 5.1. Suitable Extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Not combustible.

### 5.2. Unsuitable Extinguishing media

Not available.

### 5.3. Specific hazards arising from the chemical

Keep product and empty containers away from heat and sources of ignition.

### 5.4. Special protective actions for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### 5.5. Hazardous combustion products

Potassium oxides. Silicon dioxide

## Section 6 – Accidental Release Measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

## 6.2. Environmental precautions

Discharge into the environment must be avoided.

## 6.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal.

## Section 7 – Handling and Storage

### 7.1. Precautions for safe Handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place.

## Section 8 – Exposure Controls/Personal Protection

### 8.1. Appropriate engineering controls

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

### 8.2. Individual protection measures, such as personal protective equipment (PPE)

#### Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

#### Skin protection

Wear appropriate protective gloves to prevent skin exposure.

#### Body Protection

Wear appropriate protective clothing to prevent skin exposure.

#### Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

## Section 9 – Physical and Chemical Properties

### 9.1. Information on basic physical and chemical properties

Appearance: white solid

Odor: Odorless.

pH: Not applicable (forms highly alkaline solution when in liquid state)

Vapor Pressure:  $\leq 1100$  hPa @ 50 °C

Vapor Density: Not applicable

Evaporation Rate: Not applicable

Viscosity: Not applicable  
Boiling Point: Not available  
Melting Point: Not available  
Decomposition Temperature: Not available  
Solubility: Not available  
Partition coefficient; n-octanol/water: Not available  
Autoignition Temperature: Not available  
Flash point: Not available

## Section 10 – Stability and Reactivity

### 10.1. Reactivity

None known, based on information available.

### 10.2. Chemical stability

Stable under normal temperatures and pressures.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur.

None under normal processing.

### 10.4. Conditions to avoid:

Incompatible materials.

### 10.5. Incompatible materials

Acids, Metals.

### 10.6. Hazardous decomposition products

Potassium oxides, Silicon dioxide.

## Section 11 – Toxicological Information

### 11.1 Health effects associated with ingredients

#### Acute toxicity

oral LD50 = 5700 mg/kg ( Rat )

#### Skin corrosion/irritation

Not available

#### Serious eye damage/eye irritation

Not available

#### Respiratory or skin sensitization

Not available

#### Germ cell mutagenicity

Not available

#### Carcinogenicity

Not listed on: IARC, NTP, ACGIH, OSHA, Mexico.

#### Reproductive toxicity

Not available

**Specific target organ toxicity - single exposure**

Not available

**Specific target organ toxicity - repeated exposure**

Not available

**Aspiration hazard**

Not available

## Section 12 – Ecological Information

### 12.1. Ecotoxicity

#### Freshwater fish

LC50: = 3185 mg/L, 96h semi-static (*Brachydanio rerio*)

LC50: 301 - 478 mg/L, 96h (*Lepomis macrochirus*)

#### Crustaceans

EC50: = 216 mg/L, 96h (*Daphnia magna*, Water flea)

### 12.2. Bioaccumulative potential

Not available

### 12.3. Mobility in soil

Will likely be mobile in the environment due to its water solubility.

### 12.4. Persistence and Degradability

Soluble in water. Persistence is unlikely based on information available.

### 12.5. Other adverse effects

Not available

## Section 13 – Disposal Considerations

### 13.1. Disposal methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## Section 14 – Transport Information

### 14.1. DOT

UN proper shipping name	Not regulated
Transport hazard class(es)	Not regulated
Packing Group	Not regulated

### 14.2. IMDG Sea transport

UN number	Not regulated
UN proper shipping name	Not regulated

Transport hazard class(es) Not regulated

Packing Group Not regulated

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

No information available

**14.3. IATA Air transport**

UN number Not regulated

UN proper shipping name Not regulated

Transport hazard class(es) Not regulated

Packing Group Not regulated

**14.4. IMDG/IMO**

UN number Not regulated

UN proper shipping name Not regulated

Transport hazard class(es) Not regulated

Packing Group Not regulated

**Section 15 – Regulatory Information**

**15.1. Safety, health and environmental regulations**

U.S.A. (TSCA): Listed.

Canada (DSL/NDSL): DSL: Listed; NDSL: Not listed.

Europe (EINECS/ELINCS/NLP): Listed.

Australia (AICS): Listed.

Korea (ECL): Listed.

China (IECSC): Listed.

Japan (ENCS): Listed.

Philippines (PICCS): Listed.

**Section 16 : Additional Information**

**16.1. List of abbreviation and acronyms used in this MSDS**

**SDS** : Safety Data Sheets

**Index N°** : atomic number of the element most characteristic of the properties of the substance

**CAS No** : Chemical Abstracts Service number

**EC No** : EINECS Number : European Inventory of Existing Commercial Substances

**Repr. Cat. 2** : Substance presumed human reproductive toxicant

**Acute Oral Cat. 5** : Substance which is of relatively low acute oral toxicity.

**GHS** : Globally Harmonised System of Classification and Labelling

**LD<sub>50</sub>** : Median Lethal Dose

**LC<sub>50</sub>** : Lethal Concentration, 50%

**N.A.** : Not Applicable

**OSHA** : Occupational Safety & Health Administration

**Cal OSHA** : The State of California Division of Occupational Safety and Health (DOSH)

**PEL** : Permissible Exposure Limits

**ACGIH** : American Conference of Governmental Industrial Hygienists

**TLV** : Threshold Limit Value

**Japanese MITI** : Japanese Ministry of International Trade and Industry

**EC<sub>50</sub>** : Half maximal effective concentration

**UN** : United Nations

**U.S. EPA TSCA Inventory**: Inventory of the chemical substances manufactured or processed in the United States according to Toxic Substances Control Act compiled and published under the authority of the Environmental Protection Agency

**Canadian DSL**: Canadian Domestic Substances List

## **16.2. List of relevant hazard statements and precautionary statements used in this MSDS**

### **Hazard Statements**

Causes skin irritation

Causes serious eye irritation

### **Precautionary Statements**

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

IF ON SKIN: Wash with plenty of soap and water

If skin irritation occurs: Get medical advice/attention

Take off contaminated clothing and wash before reuse

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention

## **16.4. Disclaimer of Liability**

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