

**SAFETY DATA SHEET**

Silica Up

**SECTION 1: IDENTIFICATION OF SUBSTANCE / MIXTURE**

Product name: Silica Up  
Fertilizer formula: Not Applicable  
Product type: Liquid  
Product usage: pH Adjustment  
Restrictions on use: n/a  
Initial Supplier: Future Harvest Plantlife Products  
Emergency Telephone Number: 250-491-0255

**SECTION 2: HAZARD IDENTIFICATION**

**2.1 Classification of the substance or mixture**

Classified according to the US Hazard Communication Standard (HCS 2012).  
Classification: Not applicable

**2.2 Label elements**

P280 Wear protective gloves/eye protection/face protection.

Response:

P370 + P378 In case of fire: Use water spray or fog to extinguish.

Disposal:

P501 Dispose of contents and container in accordance with local, regional, national and international regulations

**2.3 Other hazards** Dries to form glass film, which can easily cut skin. Spilled material is very slippery. Can etch glass if not promptly removed.

**SECTION 3: COMPOSITION / IDENTIFICATION ON INGREDIENTS**

Chemical Name	CAS No.	Concentration	Other Names
Potassium Silicate	1312-76-1	29%	Silicic acid, potassium salt

**Note:** There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Occupational exposure limits, if available, are listed in section 8.

#### **SECTION 4: FIRST-AID MEASURES**

##### **4.1 Description of first aid measures**

Eyes contact: In case of contact with eyes, rinse immediately with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Get medical attention if irritation occurs.

Inhalation: Remove the victim from site of exposure to fresh air. If breathing is difficult, give oxygen. If not breathing give artificial respiration. Get medical attention.

Ingestion: Do not induce vomiting. Wash out mouth with water and give 200-300 ml (half a pint) of water to drink. Obtain medical attention.

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

Alkaline. Risk of serious damage to eyes. Irritating to skin. The toxicity of potassium silicate is dependent on the silica to alkali ratio and on the pH.

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

Obtain immediate medical attention.

#### **SECTION 5: FIRE-FIGHTING MEASURES**

##### **5.1 Extinguishing media**

Compatible with all standard fire fighting techniques.

##### **5.2 Special hazards arising from the substance or mixture**

Not applicable. Aqueous solution. Non-combustible.

##### **5.3 Advice for firefighters**

None

#### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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

Wear suitable protective clothing. Wear eye/face protection.

### **6.2 Environmental precautions**

Do not allow to enter drains, sewers or watercourses. Advise authorities if spillage has entered water course or sewer or has contaminated soil or vegetation.

### **6.3 Methods and materials for containment and cleaning up**

Caution - spillages may be slippery. Contain spillages with sand, earth or any suitable adsorbent material. Transfer to a container for disposal or recovery.

### **6.4 Reference to other sections**

See Also Section 8.

## **SECTION 7: HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

Avoid contact with eyes, skin and clothing. Avoid generation of mist. Provide adequate ventilation. Emergency shower and eye wash facilities should be readily available. See Also Section 8

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

Storage temperature 0-95° C. Loading temperature 45-95 ° C. Provide an adequate bund wall. Unsuitable containers: Do not store in aluminum, fiberglass, copper, brass, zinc or galvanized containers. See Also Section 10.

### **7.3 Specific use(s):**

Not available

## **SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION**

### **8.1 Control parameters**

Potassium Silicate: No Occupational Exposure Limit assigned.

An exposure limit of 2 mg/m<sup>3</sup> (15 min TWA) is recommended by analogy with potassium hydroxide (UK EH40).

**8.2 Appropriate engineering controls** General ventilation is usually adequate. Use local exhaust ventilation and enclosure, if necessary to control amount in the air.

### **8.3 Individual protection measures, such as personal protective equipment**

General information: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin protection Hand protection: Chemical resistant gloves

Other: Wear suitable protective clothing.

Respiratory protection: In case of inadequate ventilation, use respiratory protection.

Hygiene measures: Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

The primary hazard of potassium silicate is the alkalinity. Avoid release to the environment.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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

Appearance: Colourless

Odour: Odorless

Odour threshold: Odorless

pH: 11-12

Initial boiling point/boiling range: > 100°C

Flash point: Not applicable

Evaporation rate: Not volatile (butyl acetate=1)

Flammability: Not flammable

Upper/lower flammability or explosive limits:

Vapor pressure: Not Applicable

Vapor density: Not volatile Relative Density: 1.0 at 25.1±0.5°C (water=1)

Solubility(ies):

Water solubility- Miscible

Partition coefficient Octanol/Water: The product is more soluble in water;

log(octanol/water) <1

Auto-ignition temperature: Not applicable

Decomposition temperature: Not available

Viscosity: Not viscous

Explosive properties: Not explosive

Oxidizing properties: Not oxidizer

### **9.2 Other information**

Melting point/Freezing point: < 0°C

VOC: Not an organic compound

Specific Gravity: 1.39 ±0.05

Miscibility: Miscible

Fat solubility: Not applicable

Gas group: Not applicable

## **SECTION 10: STABILITY AND REACTIVITY**

### **10.1 Reactivity**

See Section: 10.3

### **10.2 Chemical stability**

The product is stable under normal handling and storage conditions described in Section 7. Reacts with acids and alkalis.

### **10.3 Possibility of hazardous reactions**

When arc welding vessels containing aqueous solutions of this material, take care to control any explosion risk from hydrogen evolved by electrolysis. Aqueous solutions will react with aluminium, zinc, tin and their alloys evolving hydrogen gas which can form an explosive mixture with air. Can react violently if in contact with acids. Can react with sugar residues to form carbon monoxide.

### **10.4 Conditions to avoid**

Gels and generates heat when mixed with acid. May react with ammonium salts resulting in evolution of ammonia gas. Flammable hydrogen gas may be produced on contact with aluminum, tin, lead, and zinc.

### **10.5 Incompatible materials**

See Section: 10.3

### **10.6 Hazardous decomposition products**

None known

## **SECTION 11: TOXICOLOGICAL INFORMATION**

### **11.1 Information on likely routes of exposure**



All symptoms of acute toxicity are due to high alkalinity. Material will cause irritation.

### **11.2 Information on toxicological effects**

Acute toxicity (list all possible routes of exposure)

Oral Product: Oral LD50 (rat) >5000 mg/kg

Dermal Product: Irritating to skin.

Inhalation Product: No data available.

Repeated dose toxicity Product: No data available.

Skin corrosion/irritation Product: Not sensitising.

Serious eye damage/eye irritation: Irritating to eyes. Risk of serious damage to eyes.

Respiratory or skin sensitization Product: Not a skin sensitizer.

Carcinogenicity Product: This substance has no evidence of carcinogenic properties.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans: No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens: No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): No carcinogenic components identified

Germ cell mutagenicity

In vitro Product: No mutagenic components identified

In vivo Product: No mutagenic components identified

Reproductive toxicity Product: No components toxic to reproduction

Specific target organ toxicity - single exposure Product: None known

Specific target organ toxicity - repeated exposure Product: None known

Aspiration hazard Product: Not classified

Other effects: None known.

## **SECTION 12: ECOLOGICAL INFORMATION**

### **12.1 Toxicity**

Fish (*Leuciscus idus*) LC50 (48 hour) >146 mg/l

Aquatic invertebrates: (*Daphnia magna*) EC50 (24 hour) >146 mg/l

### **12.2 Persistence and Degradability**

Inorganic. Soluble silicates, upon dilution, rapidly depolymerise into molecular species indistinguishable from natural dissolved silica.

### **12.3 Bioaccumulative potential**

Inorganic. The substance has no potential for bioaccumulation.

### **12.4 Mobility in soil**

Soil/water partition coefficient (Koc): N/A

Mobility: Soluble in water.

**12.5 Results of PBT and vPvB assessment**

Not applicable

**12.6 Other adverse effects**

The alkalinity of this material will have a local effect on ecosystems sensitive to changes in pH.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

Discharge of this product to sewage treatment works is dependent on local regulations with regard to pH controls. Dispose of this material and its container to hazardous or special waste collection point. Disposal should be in accordance with local, state or national legislation.

Waste material is classified as a RCRA Hazardous waste if it exhibits the corrosive characteristic (pH greater than or equal to 12.5) .

Packing: Empty containers should be taken for local recycling, recovery or waste disposal.

**SECTION 14: TRANSPORT INFORMATION**

Canadian TDG: Not Regulated

US DOT: Not Regulated

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code  
Not applicable

**SECTION 15: REGULATORY INFORMATION**

TSCA inventory: Not Listed

Australia AICS: On or in compliance with the inventory

Canada DSL Inventory List: On or in compliance with the inventory

EINECS, ELINCS or NLP: On or in compliance with the inventory

Japan (ENCS) List: On or in compliance with the inventory  
China Inv. Existing Chemical Substances: Not in compliance with the inventory.  
Korea Existing Chemicals Inv. (KECI): On or in compliance with the inventory  
Canada NDSL Inventory: Not in compliance with the inventory.  
Philippines PICCS: On or in compliance with the inventory  
US TSCA Inventory: On or in compliance with the inventory  
New Zealand Inventory of Chemicals: On or in compliance with the inventory  
Japan ISHL Listing: On or in compliance with the inventory  
Japan Pharmacopoeia Listing: Not in compliance with the inventory.

### **SECTION 16: OTHER INFORMATION**

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