



# MATERIAL SAFETY DATA SHEET

## HML SILCO powder

Date of Issue: 20 August 2017

### 1. SUBSTANCE / PREPARATION AND COMPANY IDENTIFICATION

**Chemical name of active ingredient:** potassium silicate

**Synonyms:** soluble potassium silicate powder  
silicic acid, potassium salt  
potassium hydroxy(oxo)silanolate (IUPAC)

**Recommended use:** An adjuvant to enhance the effectiveness of specific potassium based soap fungicides and other substances on various horticultural crops.

**Supplier:** Henry Manufacturing Limited  
P.O. Box 12-015 Ahuriri  
Napier, 4144  
Phone 027 – 294 – 1490  
06 – 874 – 2921  
Fax 06 – 874 – 2920

**Emergency telephone number:** 0800 POISON (0800 764 766) 24 hours

### 2. HAZARDS IDENTIFICATION

**Hazard Classifications:** Acutely toxic – 6.1D (oral)  
Skin / Eye Irritation – 6.3A, 6.4A  
Harmful to Vertebrates – 9.3C

**HSNO Approval Code:** HSR004068

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### Substance/preparation Information on hazardous ingredients

Common Name	CAS No	%
potassium silicate ( $K_2SiO_3$ )	1312-76-1	min 99.0

### 4. FIRST-AID MEASURES

Description of necessary first aid measures:

<u>First-aid measures</u>	<u>Effects and symptoms</u>
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**Ingestion:** Acutely toxic. May be harmful if swallowed. If swallowed do NOT induce vomiting. Wash out mouth with plenty of water. Get

medical attention. Never give anything by mouth to an unconscious person.

<b>Inhalation:</b>	The dust particles may cause irritation to the respiratory tract. If inhaled move to fresh air and give oxygen if breathing is difficult.
<b>Skin contact:</b>	Wet product or dry product on moist skin may cause irritation and/or caustic burn to the skin. Avoid contact with the skin. Wash affected area with plenty of soap and water.
<b>Eye contact:</b>	May cause severe irritation to the eyes. Avoid contact with the eyes. Flush eyes with copious quantities of flowing water for 15 minutes. Seek medical attention.
<b>Notes to a physician:</b>	Treat symptomatically. This product is an alkaline chemical.

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## 5. FIRE-FIGHTING MEASURES

### HAZCHEM Code:

<b>Extinguishing media:</b>	Compatible with all extinguishing media.
<b>Hazardous thermal decomposition</b>	Substance is non-combustible.
<b>Protection of fire fighters:</b>	Chemical goggles and resistant gloves, body-covering protective clothing and rubber boots.

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## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions:</b>	Wear PVC overalls, chemical resistant gloves, facemask or goggles, rubber boots.
<b>Environmental precautions:</b>	Contain spills. Mixes with water, high pH harmful to aquatic life. Prevent runoff from entering streams, ponds, lakes, water courses, stormwater or sewer systems.
<b>Methods for cleaning up:</b>	Prevent further spillage. Shovel or sweep up spilled powder, avoiding generating dust and place in sealable container for disposal. Wash down affected area with water. Absorb and collect washings and place in the same sealable container for disposal. Seek advice from the local authority regarding disposal.

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## 7. HANDLING AND STORAGE

<b>Handling:</b>	Due to its alkalinity, care should be exercised when handling. Avoid contact with eyes and skin, and avoid breathing dust. Keep container closed.
<b>Storage:</b>	Keep sealed only in the original packaging. Store in a cool, dry, well-ventilated place away from direct sunlight. Do NOT place into or store in metal containers including aluminium, light alloy, galvanized steel or glass.
<b>Packaging material:</b>	10 kg kraft bag with plastic liner.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Workplace Exposure Guidelines

<b>Exposure standards:</b>	None established.
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### Engineering measures

**Exposure control measures:** Use with adequate ventilation especially in enclosed areas. Keep container closed.

### Personal Protective Equipment

#### **Detail specifications for equipment:**

**Respiratory system:** Appropriate respiratory protection is required where dust hazard may occur.

**Skin and body:** Wear long sleeved shirt, long pants.

**Hands:** Use gloves chemically resistant (eg nitrile or neoprene).

**Eyes:** Use safety glasses if exposure possible.

**General hygiene:** When handling, do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use.

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## **9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State: Colour, Odour:** white, odourless powder  
**pH:** 10.5-13.5 (100g/L solution @ 20°C)  
**Vapour Pressure:** n/a  
**Melting point:** 900 - 1000°C  
**Solubility:** 100% in water (room temperatures), insoluble in alcohol  
**Density:** 0.865 g/cm<sup>3</sup> (untampered); 1.410 g/cm<sup>3</sup> (tampered)  
**Flashpoint:** non-combustible  
**Explosion properties:** non-explosive  
**Oxidation properties:** non-oxidising

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## **10. STABILITY AND REACTIVITY**

**Stability:** Stable under conditions of use and storage.  
**Conditions to avoid:** None  
**Materials to avoid:** Generates heat with acids. Heat reaction may be violent. Reacts with ammonium salts to give rise to ammonia gas. Reacts with damp or wet metals and may give rise to hydrogen gas.

**Hazardous decomposition Products:** Hydrogen.  
**Hazardous polymerization:** Rapidly depolymerizes on dilution in the environment to give molecules that are indistinguishable from natural silica originating from geochemical weathering of silicate materials.

**Specific Data:**  
**Hazardous reactions:** Acids, reactive metals, ammonium salts

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## **11. TOXICOLOGICAL INFORMATION**

**Acute toxicity – Oral:** Rat – LD<sub>50</sub> 1600 mg/kg  
**Acute toxicity – Dermal:** Not determined  
**Acute toxicity – Inhalation:** Not determined  
**Skin irritation:** Rabbit – Irritating (solution, molar ratio 3.45, 29% conc.)  
**Eye irritation:** Rabbit – Highly irritating (solution, molar ratio 3.9, 29% conc.)  
**Sensitisation:** Not a sensitiser.

**Chronic Toxicity**  
**Mutagenicity:** Not Mutagenic  
**Carcinogenicity:** Not listed as a carcinogen by IARC, NTP, OSHA or ACGIH  
**Reproduction toxicity:** Not a Reproductive toxin  
**Other Information:**

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## 12.ECOLOGICAL INFORMATION

**Ecotoxicity:** High pH is harmful to aquatic life. Not persistent in aquatic system. Do not allow product or diluted product to reach groundwater, watercourse or sewerage system.  
May be harmful to terrestrial vertebrates.  
Not toxic to bees.

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## 13.DISPOSAL CONSIDERATIONS

**Methods of disposal:** Do not burn the bag. Ensure the bag is empty and dispose/bury in an approved landfill. Do not contaminate any waterway with chemical or empty container. Ensure that any unwanted product is used in accordance with label directions.

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## 14.TRANSPORT INFORMATION – International transport regulations

<b>UN number</b>	<b>N/A</b>
<b>Class or Division:</b>	<b>N/A</b>
<b>Packing Group:</b>	
<b>Marine Pollutant:</b>	<b>N/A</b>
<b>Proper shipping name:</b>	
<b>DOT:</b>	<b>Not regulated as a hazardous material for transportation.</b>

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## 15.REGULATORY INFORMATION

<b>ACVM Registered Number:</b>	<b>(not applicable)</b>
<b>HSNO Approval Code:</b>	<b>HSR004068</b>
<b>FDA (USA):</b>	<b>Regarded as GRAS (Generally Recognised as Safe).</b>
<b>SARA Title III (USA):</b>	<b>Not an Extremely Hazardous Substance under §302.</b>
	<b>Not a Toxic Chemical under §313.</b>
	<b>Acute Health Hazard under §311/312</b>

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## 16.OTHER INFORMATION

**Additional information:** **Original Issue date: 24 June 2016**  
**Revision Date: 20 August 2017**  
**Replaces: 24 June 2016**

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### ***Disclaimer EXCLUSION OF LIABILITY: PLEASE READ***

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