

## MATERIAL SAFETY DATA SHEET

Date prepared: 13 October 2013  
Date revised: (first edition)

### 1. Identification of the Substance/ Preparation and the Company/Undertaking

Substance or preparation trade name	Silicon
Company/undertaking name & address	Shogun Fertilizers Kemp House 152 City Road London. EC1V 2NX
Emergency telephone	
Email	

### 2. Composition

Substance	Soilless Plant additive containing potassium silicate
% Content	Potassium (K <sub>2</sub> O) 4.6% w/v Silicon (Si) 1.4% w/v
CAS Number	1312-76-1
Classification	Product not classified
EINECS	2151991

### 3. Hazards Identification

PRIMARY HAZARDS	Alkaline solution - irritant Can cause burns with prolonged exposure to neat solution.
HEALTH EFFECTS: - EYES - INGESTION - INHALATION - SKIN	Irritation. Irritation to the month, throat and digestive tract Exposure to mist may cause irritation to nose throat and respiratory tract. Irritation

### 4. First aid measures

Skin contact	Immediately wash with or clean water and remove contaminated clothing. Seek medical attention if symptoms develop.
Eye contact	Immediately irrigate with eyewash or clean water for 5 mins. Seek medical attention immediately.
Ingestion	Do not induce vomiting. Drink plenty of water (1-3 glasses) or milk. Seek medical attention. Display label where possible.
Inhalation	Remove from exposure and into fresh air. Seek medical attention immediately.

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### 5. Fire fighting measures

Suitable extinguishing media	<b>NON-FLAMMABLE. NON-COMBUSTIBLE.</b> Use extinguishers suitable to surrounding materials. Water spray, AFFF foam, chemical dry powder or carbon dioxide.
Unsuitable extinguishing media	None
Special hazards in fire	None
Required special protective equipment for fire fighters	Self-contained breathing apparatus.

### 6. Accidental release measures

Spillages	Contain spillage and absorb in sand and shovel into suitable containers ensure suitable gloves and goggles are worn during removal of spillage.
Personal precautions	Wear suitable gloves and goggles in case of splashes
Environmental precautions	Do not pour down drain. If containment is not possible and material enters drains, dilute as much as possible with water and immediately notify the environment agency.

### 7. Handling and storage

Handling	Prevent contact with eyes, skin and clothing. Wash after handling. Use in ventilated area to reduce risk of mist or aerosol formation.
Storage	Store above 7°C. Keep away from direct sunlight. Do not store above 50°C for prolonged period of time. Do not store in aluminium.

### 8. Exposure Controls

Eye protection	Wear safety goggles.
Hand protection	Wear rubber gloves
Hygiene measures	An eyewash should be nearby and ready for use.

### 9. Physical and chemical properties

Appearance	Clear colourless liquid
Odour	None
pH	10-11.5
Boiling point	100 C°
Melting point	No data
Flashpoint	No data
Explosive properties	No data
Vapour pressure	No data
Relative density	1.1 kg/l
Solubility	Water soluble

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### 10. Stability and reactivity

Conditions to avoid	Temperatures above 50°C, below 4°C.
Materials to avoid	Aluminium, Zinc, Tin and their alloys. Reaction with such metal produces hydrogen gas. May react violently with acids.
Hazardous decomposition products	None known.

### 11. Toxicological information

Acute toxicity	N/A
Local effects	N/A
Excessive exposure may affect human health as follows:	
- Skin contact;	Irritant
- Eye contact;	Irritant
- Inhalation:	Unless solution is sprayed inhalation of silicate solution is unlikely to occur. Irritation of the nose throat and lungs, due to the alkalinity is the likely effect. The toxicity of sodium silicate is dependant on the silica to alkali weight ratio and the pH. Ld50 oral rat value reported in the literature are in the range of 1600-320mg/kg.
- Ingestion:	

### 12. Ecological information

Environmental fate and Distribution	The product is soluble in water. The product has low potential for bioaccumulation and upon dilution depolymerise into molecular species indistinguishable from natural dissolved silica. However, the pH of most silicate solutions is above the acceptable limits for direct discharge to sewers and water ways.
Toxicity	Poses no significant threat.

### 13. Disposal Considerations

Under the UK Control of pollution (Special Waste) regulations potassium silicate is classified as special waste. Therefore disposal should be carried out by a registered waste management company and NOT disposed of at landfill or down the drain. Consult local and national relations before disposal.

### 14. Transport information

Classification data:	N/A
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### 15. Regulatory information

Risk Phrases	R36/R38	Irritating to eyes and skin
Safety Phrases	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.