

# Potsil

## The Plant Protector

### Safety Data Sheet

Prepared in accordance with Annex II of the REACH Regulation EC 1907/2006,  
Regulation (EC) 1272/2008 and Regulation (EC) 453/2010

PPP06-14-SDS14 Date of issue: 16/05/2019 (Supersedes PPP05-14-SDS41 03/05/2014)

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#### SECTION 1. IDENTIFICATION OF SUBSTANCE/MIXTURE AND OF THE COMPANY

##### 1.1 Product identifier

Substance name: Potassium Silcate  
Synonyms: Mineral Fixing Agent, Mineral Primer.  
Product Form: Thick Liquid  
Main Chemical Name/Formula: Potassium Silicate –  $K_2O_3Si$   
Trade Name: Potsil / Potsil – 'The Plant Protector'  
CAS: 1312-76-1  
EINECS: 215-199-1

##### 1.2 Relevant identified uses of the substance or mixture and uses advised against

###### 1.2.1 Relevant identified uses

Use of substance: Liquid potassium silicate formulated for use in agriculture applications, hydroponics and garden plant/flower treatments.

###### 1.2.2 Uses advised against:

None Identified

##### 1.3 Details of the supplier of the safety data sheet:

Name: Potsil  
Address: Malt Kiln Farm  
Low Road  
Pentney  
King's Lynn  
Norfolk  
PE32 1JF  
United Kingdom  
Phone Number: +44(0)1760 338898  
Email (General): enquiries@potsil.com  
Email (MSDS Competent): dale.dempsey@potsil.com  
Website: www.potsil.com

##### 1.4 Emergency telephone number

Emergency numbers: +44(0)1760 338898 (Norfolk Office)  
+44(0)7969 896118 (Out of hours)  
+44(0)1795 871105 (Kent Farm)

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### SECTION 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance

The product is classified and labelled according to the CLP regulation

##### 2.1.1 Classification according to Regulation (EC) 1272/2008

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

##### 2.1.2 Classification according to Directive 67/548/EEC

R36/37/38

##### 2.1.3 Additional information

For full text of H-statements and R-phrases: See section 16

#### 2.2 Label elements

##### 2.2.1 Labelling according to Regulation (EC) 1272/2008

Signal word: Warning

Hazard pictogram:



Hazard statements:

H315: Causes skin irritation

H319: Causes serious eye irritation

Precautionary statements:

P102: Keep out of reach of children

P262: Do not get in eyes, on skin or on clothing

P280: Wear protective gloves/protective clothing/  
eye protection/face protection

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several  
minutes. Remove contact lenses, if present and  
easy to do. Continue rinsing.

P302+P352 IF ON SKIN: Remove all contaminated clothing,  
wash with plenty of water/shower.

P310 Immediately call a poison centre or doctor/physician.

P501 Dispose of contents/container in accordance with  
local, regional, national and international regulation.  
Use a registered hazardous waste carrier/licence holder,  
an/or contact the manufacturer.

#### 2.3 Other Hazards

The substance does not meet the criteria for PBT or vPvB substance. No other hazards identified.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

CAS number	EC number	Registration No	Identification name	Classification according to 67/548/EEC
<b>MAIN CONSTITUENTS</b>				
1312-76-1	215-199-1	01-2119456888-17	Silicic acid, potassium salt; Potassium silicate 34.0% w/w	R36/37/38
7732-18-5	231-791-2		Water 66.0% w/w	
<b>LESSER CONSTITUENT (Natural colour indicator)</b>				
479-61-8	207-536-6	-	Chlorophyll a ;1% w/w (grass derived)	-

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### SECTION 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

##### General advice:

No known delayed effects. Consult a physician for all exposures except for minor instances.

##### Following inhalation

Remove from exposure. Obtain medical attention immediately.

##### Following skin contact

Carefully and gently wipe the contaminated body surfaces in order to remove all traces of product. Wash affected area immediately with plenty of water. Remove contaminated clothing. If necessary seek medical advice.

##### Following eye contact

Rinse eyes immediately with plenty of water and seek medical advice.

##### Following ingestion

Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Obtain medical attention.

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

Potsilica 3-80 is not acutely toxic via the oral, dermal, or inhalation route. The substance is classified as irritating to skin and entails a risk of serious eye irritation. There is no concern for adverse systemic effects because local effects (pH-effect) are the major health hazard.

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

Follow the advises given in section 4.1

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### SECTION 5. FIREFIGHTING MEASURES

#### 5.1 Extinguishing media

##### 5.1.1 Suitable extinguishing media

Suitable extinguishing media: The product is not combustible. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

##### 5.1.2 Unsuitable extinguishing media

Not determined

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

The product does not burn

#### 5.3 Advice for fire fighters

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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### SECTION 6. ACCIDENTAL RELEASE MEASURES

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

##### 6.1.1 For non-emergency personnel

Adhere to personal protection rules (refer to sections 7 and 8)

Avoid contact with skin, eyes, and clothing – wear suitable protective equipment (see section 8).

##### 6.1.2 For emergency responders

Avoid contact with skin, eyes, and clothing – wear suitable protective equipment (see section 8).

#### 6.2 Environmental precautions

Avoid uncontrolled spills to watercourses and drains (pH increase). Any large spillage into watercourses must be alerted to the Environment Agency or other regulatory body.

Don't allow product to enter soil, sewage system or any ground water course. Adhere to local governmental rules and regulations. In the case of ground contamination inform the relevant authorities immediately.

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

Plug drainage courses.

Absorb with liquid-binding material (Sand, diatomite, acid binders, universal binders, sawdust).

Flush residues with plenty of water.

Dispose of the residue materials according to the regulations.

Thoroughly clear contamination.

### 6.4 Reference to other sections

For more information on exposure controls/personal protection or disposal considerations, please check section 8 and 13 of this safety data sheet.

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## SECTION 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

#### 7.1.1 Protective measures

Avoid contact with skin and eyes. Wear protective equipment (refer to section 8 of this safety data sheet). When handling tins usual precautions should be paid to the risks outlined in the Council Directive 90/269/EEC.

Keep receptacles tightly sealed. Ensure good ventilation/extraction in the workplace.

#### 7.1.2 Advice on general occupational hygiene

Avoid inhalation or ingestion and contact with skin and eyes. General occupational hygiene measures are required to ensure safe handling of the substance. These measures involve good personal and housekeeping practices (i.e. regular cleaning with suitable cleaning devices), no drinking, eating and smoking at the workplace. Shower and change clothes at end of work shift.

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

Keep at room temperature and not exceeding 50 deg. C. Bulk storage should be in purpose designed containers. Keep away from acids, significant quantities of paper, straw, and nitro compounds. Keep out of reach of children. Do not use aluminium or ferrous metals for transport or storage.

Polyethylene is a suitable material for storage and transport.

Do not store in the same place with acids. Store away from metals. Keep container tightly sealed.

Protect from frost. Protect from heat and direct sunlight. Storage class 12.

### 7.3 Specific end use(s)

For more information please see the relevant exposure scenario, available via your supplier and check section 2.1: Control of worker exposure.

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### SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General protective and hygienic measures:

Immediately remove all soiled and contaminated clothing. Avoid contact with the eyes and skin. Do not inhale vapours. Wash hands before breaks and at the end of work.

#### 8.1 Control parameters

DNEL's

Route of exposure	Workers			
	Acute effects local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required			
Inhalation	Not required			
Dermal	Hazard identified but no DNEL available	No hazard identified	Hazard identified but no DNEL available	No hazard identified

Route of exposure	Consumers			
	Acute effects local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	No exposure expected	No hazard identified	No exposure expected	No hazard identified
Inhalation	No exposure expected	No hazard identified	No exposure expected	No hazard identified
Dermal	Hazard identified but no DNEL available	No hazard identified	Hazard identified but no DNEL available	No hazard identified

PNEC's

Environment protection target	PNEC	Remarks
Fresh water	7.5 mg/L	
Freshwater sediments	No PNEC available	Insufficient data available
Marine water	1 mg / L	
Marine sediments	No PNEC available	Insufficient data available
Food (bioaccumulation)	No hazard identified	No potential for bioaccumulation
Microorganisms in sewage treatment	348 mg / L	
Soil (agricultural)	Not available	
Air	No hazard identified	

#### 8.2 Exposure controls

Appropriate protective equipment is recommended. Eye protection equipment (e.g. goggles or visors) must be worn, unless potential contact with the eye can be excluded by the nature and type of application (i.e. closed process). Additionally, face protection, protective clothing and safety shoes are required to be worn as appropriate.

Do not eat, smoke or drink in the workplace.

Please check the relevant exposure scenario via your supplier.

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### 8.2.1 Appropriate engineering controls

If user operations generate dust, use process enclosures, local exhaust ventilation, or other engineering controls.

### 8.2.2 Individual protection measures, such as personal protective equipment

#### 8.2.2.1 Eye/face protection

EN166 eye protective goggles. Eyewash facilities should be readily available.

#### 8.2.2.2 Skin protection

Dermal exposure has to be minimised as far as technically feasible. The use of protective gloves (nitrile - chloroprene rubber - recommended thickness of the material:  $\geq 0.5$  mm), protective standard working clothes fully covering skin, full length trousers, long sleeved overalls, with close fittings at openings and are required to be worn.

#### 8.2.2.3 Respiratory protection

Local ventilation is recommended. Use suitable respiratory protective device only when vapour or mist is formed.

#### 8.2.2.4 Thermal hazards

The substance does not represent a thermal hazard, thus special consideration is not required.

### 8.2.3 Environmental exposure controls

All ventilation systems should be filtered before discharge to atmosphere.

Avoid releasing to the environment.

Contain the spillage. Any large spillage into watercourses must be alerted to the regulatory authority responsible for environmental protection or other regulatory body.

For detailed explanations of the risk management measures that adequately control exposure of the environment to the substance please check the relevant exposure scenario, available via your supplier.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance: clear green thick aqueous liquid

Odour: odourless

Odour threshold: not applicable

pH: 11.2

Melting point: Undetermined

Boiling point: 100 °C

Flash point: not applicable

Evaporation rate: not applicable

Flammability: non flammable

Explosive limits: non explosive (void of any chemical structures commonly associated with explosive properties)

Vapour pressure: not applicable

Vapour density: not applicable

Relative density: 1.3

Solubility in water: Soluble, miscibility carrier

Partition coefficient: not applicable (inorganic substance)

Auto ignition temperature: no relative self-ignition temperature below 400 °C

Decomposition temperature: not applicable

Viscosity: not determined

Oxidising properties: no data available

### 9.2 Other information

Not available

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### SECTION 10. STABILITY AND REACTIVITY

#### 10.1 Reactivity

Stable under normal conditions

#### 10.2 Chemical stability

Under normal conditions of use and storage PS1 is stable.

#### 10.3 Possibility of hazardous reactions

No dangerous reactions known under normal conditions and use.

#### 10.4 Conditions to avoid

None identified

#### 10.5 Incompatible materials

Ferrous metals

#### 10.6 Hazardous decomposition products

Decomposes by reaction with strong acids

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### SECTION 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

##### a. Acute toxicity

Oral May cause irritation of the stomach and intestines, Nausea

Dermal Irritant

Inhalation no data available

Potsilica 3-80 is not acutely toxic.

Classification for acute toxicity is not warranted.

##### b. Skin corrosion/irritation

Prolonged skin contact may cause irritation.

##### c. Serious eye damage/irritation

Can cause severe eye irritation

##### d. Respiratory or skin sensitisation

No data available

##### e. Germ cell mutagenicity

Bacterial reverse mutation assay (Ames test, OECD 471): Negative

Classification for genotoxicity is not warranted.

##### f. Carcinogenicity

No evidence of rise to a carcinogenic risk.

Classification for carcinogenicity is not warranted.

##### g. Reproductive toxicity

No evidence of reproductive effects.

Classification for reproductive toxicity according to regulation (EC) 1272/2008 is not required.

##### h. STOT-single exposure

No data available

##### i. STOT-repeated exposure

No data available

##### j. Aspiration hazard

Not known to present an aspiration hazard.

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### SECTION 12. ECOLOGICAL INFORMATION

#### 12.1 Toxicity

##### 12.1.1 Acute/Prolonged toxicity to fish

No data available

##### 12.1.2 Acute/Prolonged toxicity to aquatic invertebrates

No data available

##### 12.1.3 Acute/Prolonged toxicity to aquatic plants

No data available

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### 12.1.4 Toxicity to micro-organisms e.g. bacteria

No data available

### 12.1.5 Chronic toxicity to aquatic organisms

No data available

### 12.1.6 Toxicity to soil dwelling organisms

No data available

### 12.1.7 Toxicity to terrestrial plants

No data available

### 12.1.8 General effect

Does not accumulate in organisms

### 12.1.9 Further information

None available

### 12.2 Persistence and degradability

Not relevant for inorganic substances

### 12.3 Bioaccumulative potential

Not relevant for inorganic substances

### 12.4 Mobility in soil

Mobile in water environment

### 12.5 Results of PBT and vPvB assessment

Not relevant for inorganic substances

### 12.6 Other adverse effects

No other adverse effects are identified

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## SECTION 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Disposal should be in accordance with local and national legislation. Processing, use or contamination of this product may change the waste management options. Dispose of container and unused contents in accordance with applicable member state and local requirements.

The used packing is only meant for packing this product; it should not be reused for other purposes.

After usage, empty the packing completely.

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## SECTION 14. TRANSPORT INFORMATION

Not classified as hazardous for transport [ADR (Road), RID (Rail), AND (inland waterways) and IMDG (Sea), (ICAO/IATA)].

### 14.1 UN-Number

Not applicable

### 14.2 UN proper shipping name

Not applicable

### 14.3 Transport hazard class

Not applicable

### 14.4 Packing group

Not applicable

### 14.5 Environmental hazards

None

### 14.6 Special precautions for user

Not applicable

### 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not regulated.

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### SECTION 15. REGULATORY INFORMATION

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance

Authorisations: Not required

Restrictions on use: None

Other EU regulations: None.

National regulations: Not applicable

#### 15.2 Chemical safety assessment

No data available

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### SECTION 16. OTHER INFORMATION

Data are based on our latest knowledge but do not constitute a guarantee for any specific product features and do not establish a legally valid contractual relationship.

#### 16.1 Hazard Statements

H315: Causes skin irritation

H318: Causes serious eye damage

H335: May cause respiratory irritation

#### 16.2 Precautionary Statements

P102: Keep out of reach of children

P280: Wear protective gloves/protective clothing/eye protection/face protection

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P302+P352: IF ON SKIN: Wash with plenty of water

P310: Immediately call a poison centre or doctor/physician

P501: Dispose of contents/container in accordance with local/regional/national/international regulation - use a registered hazardous waste carrier/licence holder, and/or contact the manufacturer

#### 16.3 Risk Phrases

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

#### 16.4 Safety Phrases

S2: Keep out of the reach of children

S25: Avoid contact with eyes

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S37: Wear suitable gloves

S39: Wear eye/face protection

#### 16.5 Abbreviations

EC50: median effective concentration

LC50: median lethal concentration

LD50: median lethal dose

NOEC: no observable effect concentration

WEL: workplace exposure limit

OEL: occupational exposure limit

PBT: persistent, bioaccumulative, toxic chemical

PNEC: predicted no-effect concentration

STEL: short-term exposure limit

TWA: time weighted average

vPvB: very persistent, very bioaccumulative chemical

EULA: European Lime Association

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#### Disclaimer

This safety data sheet (SDS) is based on the legal provisions of the REACH Regulation (EC 1907/2006; article 31 and Annex II), as amended. Its contents are intended as a guide to the appropriate precautionary handling of the material. It is the responsibility of recipients of this SDS to ensure that the information contained therein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. Information and instructions provided in this SDS are based on the current state of scientific and technical knowledge at the date of issue indicated. It should not be construed as any guarantee of technical performance, suitability for particular applications, and does not establish a legally valid contractual relationship.

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