

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

· **Trade name:** Potsil

· **Registration number** Silicic acid, potassium salt: 01-2119456888-17

· **UFI:** 7300-D0CR-700V-2FRW

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

· **Sector of Use** SU1 Agriculture, forestry, fishery

· **Product category** PC12 Fertilisers

· **Application of the substance / the mixture** Fertiliser

· **Uses advised against**

Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).

Processes involving extreme heat use advised against.

1.3 Details of the supplier of the safety data sheet

· **Manufacturer/Supplier:**

POTSIL

Malt Kiln Farm

Low Road

Pentney

King's Lynn

Norfolk

PE32 1JF

dale.dempsey@potsil.com

email: dale.dempsey@potsil.com

United Kingdom.

+44 (0)1760 338898

· **Further information obtainable from:** Product safety department.

· **1.4 Emergency telephone number:** +44 (0)1760 338898 (not 24hrs)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

· **Classification according to Regulation (EC) No 1272/2008**



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

2.2 Label elements

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms** GHS07

· **Signal word** Warning

· **Hazard-determining components of labelling:**

Silicic acid, potassium salt

· **Hazard statements**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

· **Precautionary statements**

P260 Do not breathe mist/vapours/spray.

P280 Wear protective gloves / eye protection.

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

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.09.2019

Revision: 18.09.2019

Trade name: Potsil

(Contd. of page 1)

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

P337+P313 If eye irritation persists: Get medical advice/attention.

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**

· **Description:** An aqueous solution of potassium silicate with multifunctional additives.

· **Dangerous components:**

CAS: 1312-76-1	Silicic acid, potassium salt	>35-≤50%
EINECS: 215-199-1	⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

Immediately rinse with water.

If skin irritation continues, consult a doctor.

· **After eye contact:**

DO NOT DELAY!

Check for and remove any contact lenses.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

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

No further relevant information available.

· **Information for doctor:** Treat symptomatically and supportively.

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

No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

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

During heating or in case of fire poisonous gases are produced.

· **5.3 Advice for firefighters**

· **Protective equipment:**

Do not inhale explosion gases or combustion gases.

Wear fully protective suit.

Wear self-contained respiratory protective device.

GB

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.09.2019

Revision: 18.09.2019

Trade name: Potsil

(Contd. of page 2)

SECTION 6: Accidental release measures

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

Ensure adequate ventilation
Particular danger of slipping on leaked/spilled product.
Wear protective equipment. Keep unprotected persons away.

- **6.2 Environmental precautions:**

Do not allow product to reach sewage system or any water course in the undiluted form.

- **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Send for recovery or disposal in suitable receptacles.
Ensure adequate ventilation.

- **6.4 Reference to other sections**

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.
Safety showers and eye wash facilities should be available at the work area.

- **Information about fire - and explosion protection:** Keep respiratory protective device available.

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

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

Do not store in aluminium or galvanised containers.

- **Information about storage in one common storage facility:** Do not store together with acids.

- **Further information about storage conditions:**

Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- **DNELs**

Silicic acid, potassium salt:

Workers - Hazard via inhalation route

Systemic effects

Long term exposure

- DNEL (Derived No Effect Level): 5.61 mg/m³

Workers - Hazard via dermal route

Systemic effects

Long term exposure

- DNEL (Derived No Effect Level): 1.49 mg/kg bw/day

General Population - Hazard via inhalation route

Systemic effects

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.09.2019

Revision: 18.09.2019

Trade name: Potsil

(Contd. of page 3)

Long term exposure

- DNEL (Derived No Effect Level): 1.38 mg/m³

General Population - Hazard via dermal route

Systemic effects

Long term exposure

- DNEL (Derived No Effect Level): 0.74 mg/kg bw/day

General Population - Hazard via oral route

Systemic effects

Long term exposure

- DNEL (Derived No Effect Level): 0.74 mg/kg bw/day

- **PNECs**

Silicic acid, potassium salt:

PNEC aqua (freshwater): 7.5 mg/L

PNEC freshwater (intermittent releases):: 7.5 mg/L

PNEC aqua (marine water): 1 mg/L

PNEC STP: 348 mg/L

No potential for bioaccumulation.

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment:**

Select PPE appropriate for the operations taking place taking into account the product properties.

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Do not eat or drink while working.

Ensure that washing facilities are available at the work place.

- **Respiratory protection:** Use suitable respiratory protective device in case of insufficient ventilation.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

- **Body protection:**

Alkaline resistant protective clothing

Body protection must be chosen depending on product properties, activity and possible exposure.

GB

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.09.2019

Revision: 18.09.2019

Trade name: Potsil

(Contd. of page 4)

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Fluid

Colour: Green

· **Odour:** Mild

· **Odour threshold:** Not determined.

· **pH-value:** Alkaline

· Change in condition

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: 100 °C

· **Flash point:** Cannot support combustion

· **Flammability (solid, gas):** Not applicable.

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not self-igniting.

· **Explosive properties:** Product does not present an explosion hazard.

· Explosion limits:

Lower: Not determined.

Upper: Not determined.

· **Vapour pressure at 20 °C:** 23 hPa

· **Density at 20 °C:** 1.3 g/cm³

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· Solubility in / Miscibility with water:

Not miscible or difficult to mix.

· **Partition coefficient: n-octanol/water:** Not determined.

· Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

· Solvent content:

Organic solvents: 0.00 %

VOC (EC) 0.00 %

· 9.2 Other information

NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.

· **10.2 Chemical stability**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **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 residue to form carbon monoxide.

· **10.4 Conditions to avoid** No further relevant information available.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.09.2019

Revision: 18.09.2019

Trade name: Potsil

(Contd. of page 5)

- **10.5 Incompatible materials:**
 - Strong acids.
 - Substances specifically listed in section 10.3 as incompatible.
- **10.6 Hazardous decomposition products:**
 - Metal oxide
 - Silicon compounds.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

- **LD/LC50 values relevant for classification:**

1312-76-1 Silicic acid, potassium salt

Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
 - Causes skin irritation.
- **Serious eye damage/irritation**
 - Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
 - May cause respiratory irritation.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

1312-76-1 Silicic acid, potassium salt

EC50	>100 mg/kg (daphnia)
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- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** Product is not expected to bioaccumulate.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
 - Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
 - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
 - Recommended Hierarchy of Controls:
 - Minimise waste;
 - Reuse if not contaminated;

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.09.2019

Revision: 18.09.2019

Trade name: Potsil

(Contd. of page 6)

- Recycle, if possible; or
- Safe disposal (if all else fails).

Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

- **European waste catalogue**

Waste key numbers in accordance with the European Waste Catalogue (EWC) are origin-referred defined. Since this product is used in several industries, no waste key can be provided by the supplier. The waste key number should be determined in arrangement with your waste disposal partner or the responsible authority.

- **Uncleaned packaging:**

- **Recommendation:**

Disposal must be made according to official regulations.

Container remains hazardous when empty. Continue to observe all precautions.

Containers, even those that are "empty," may contain residues that can develop hazardous gases and vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	Void
· 14.2 UN proper shipping name · ADR, IMDG, IATA	Void
· 14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class	Void
· 14.4 Packing group · ADR, IMDG, IATA	Void
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Not applicable.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	Void

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H315 Causes skin irritation.

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.09.2019

Revision: 18.09.2019

Trade name: Potsil

(Contd. of page 7)

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Annex: Exposure scenario

- **Sector of Use** SU1 Agriculture, forestry, fishery

- **Product category** PC12 Fertilisers

- **Description of the activities / processes covered in the Exposure Scenario**

See section 1 of the annex to the Safety Data Sheet.

- **Conditions of use**

- **Duration and frequency** 5 workdays/week.

- **Physical parameters**

- **Physical state** Fluid

- **Concentration of the substance in the mixture** The substance is main component.

- **Used amount per time or activity** According to directions for use.

- **Other operational conditions**

- **Other operational conditions affecting environmental exposure**

Observe section 6 of the Safety Data Sheet (Accidental release measures).

- **Other operational conditions affecting worker exposure**

Avoid contact with eyes.

Avoid contact with the skin.

Do not breathe gas/fume/vapour/aerosol.

Keep away from food, drink and animal feedingstuffs.

Keep only in the original container in a cool, well-ventilated place.

Ensure adequate ventilation, especially in closed rooms.

Avoid direct contact with the chemical /product / preparation by organisational measures.

- **Other operational conditions affecting consumer exposure** Keep out of the reach of children.

- **Other operational conditions affecting consumer exposure during the use of the product** Not applicable.

- **Risk management measures**

- **Worker protection**

- **Organisational protective measures**

No special measures required.

Employment restrictions concerning juveniles must be observed.

Keep away from food, beverages and animal feed.

Avoid contact with drinking water and / or food during application.

Provide washing facilities in the workplace.

- **Technical protective measures**

Prevent formation of aerosols.

Ensure good ventilation/exhaustion at the workplace.

Washing facilities / Water for cleaning eyes and skin should be available.

Ensure that suitable extractors are available on processing machines

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 18.09.2019

Revision: 18.09.2019

Trade name: Potsil

(Contd. of page 8)

· Personal protective measures

Do not inhale gases / fumes / aerosols.

Avoid contact with the skin.

Avoid contact with the eyes.

Use suitable respiratory protective device in case of insufficient ventilation.

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Keep away from foodstuffs, beverages and feed.

Do not eat or drink while working.

Storing food in the working area is prohibited.

Wash hands before breaks and at the end of work.

Immediately remove all soiled and contaminated clothing

Ensure that washing facilities are available at the work place.

Use suitable respiratory protective device in case of insufficient ventilation.

Tightly sealed goggles

· Measures for consumer protection

Ensure adequate labelling.

Keep out of reach of children.

· Environmental protection measures

· **Water** Do not allow product to reach sewage system or any water course in the undiluted form.

· **Soil** No special measures required.

· Disposal measures

Ensure that waste is collected and contained.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

· Disposal procedures

Containers, even those that are "empty," may contain residues that can develop hazardous vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Waste type** Partially emptied and uncleaned packaging

· Exposure estimation

· **Consumer** Not relevant for this Exposure Scenario.

· **Guidance for downstream users** No further relevant information available.

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