

Safety information sheet

SILAMOL® concentrated source of silicic acid monomers

Revision: 11-10-2014

1. IDENTIFICATION OF THE SUBSTANCE OF THE PREPARATION AND THE COMPANY

1.1 Identification of the substance of the preparation

SILAMOL®

1.2 Use of the substance of the preparation

Liquid fertilizer

1.3 Identification of the company

Agro-solutions B.V.

Valkenburgerweg 45

6361 EB NUTH

The Netherlands

Tel.: +31(0)455778761

Email: info@agro-solutions.nl

1.4 Emergency telephone

Nationaal Vergiftigen Informatie Centrum: tel +31(0)302748888

2. IDENTIFICATION OF THE RISKS

Risks for man and the environment:



Key words:

Corrosive

Risk identification:

H314 Causes severe burns

H318 Causes serious eye damage

Precautions:

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

P301 + P312 IF SWALLOWED:

If you feel unwell contact a POISON CENTER/doctor/... consult.

P305 + P338 + P351 IF IN EYES: Rinse cautiously with water for several minutes, remove contact lenses, if present and continue rinsing.

P501 Dispose of contents/packaging as per local legislation

Safety information sheet

SILAMOL® concentrated source of silicic acid monomers

Revision: 11-10-2014

3. COMPOSITION AND INFORMATION CONCERNING EXCIPIENTS

3.1 Composition

SILAMOL® is a liquid concentrate of biologically available silicon as silicic acid monomers.

Non-hazardous substances

Product Name: Tetrahydroxysilane (synonyme: silicic acid, mono-silicic acid, ortho-silicic acid)

Cas: 10193-36-9

Concentration: 3.8 – 4.2 %

Product Name: Demi water

Cas: 7732-18-5

Concentration: 48 - 52 %

Product name: Ethylene oxyde

Cas: 75-21-8

Concentration: 42 – 46 %

4. FIRST AID MEASURES

4.1 Instructions for different routes of exposure

If inhaled:

Take victim into the fresh air; consult doctor in case of complaints.

In case of contact with skin:

Wash with soap and water. If skin irritation continues, consult a doctor.

In case of contact with eyes:

Rinse eyes with running water with open eyelids for several minutes. Remove contact lenses, if possible. Continue rinsing. Protect the uninjured eye. Consult a doctor immediately.

If swallowed:

Do not induce vomiting. Rinse mouth and drink copious amounts of water. If symptoms do not decrease, consult a doctor.

4.2 Important acute and delayed symptoms and effects:

No further relevant information available.

4.3 Specification of the required immediate medical care and special treatment:

No further relevant information available.

5. FIRE-FIGHTING MEASURES

5.1. Suitable extinguishing agents

Carbon dioxide, foam, powder or water spray.

5.2 Extinguishing agents not to be used for reasons of safety

Do not use a forceful jet of water. This may spread the fire.

Safety information sheet

SILAMOL® concentrated source of silicic acid monomers

Revision: 11-10-2014

5.3. Special exposure hazards arising from the substance or the preparation itself, combustion products or resulting gases

Hydrogen chloride (HCl). Zinc oxide.

5.4. Special protective equipment for fire-fighters

Wear full protective suit.

Wear breathing protection apparatus that is independent of the ambient air.

Further details:

The product itself does not burn. Rinse the endangered tanks with water spray. Dispose of fire debris and contaminated fire fighting water according to official regulations.

6. MEASURES ON ACCIDENTAL RELEASE OF SUBSTANCE OR PREPARATION

6.1. Personal precautions

Wear protective clothing. Keep unprotected persons at a distance. Ensure adequate ventilation. Avoid contact with eyes and skin. Do not inhale the vapour. In case of effects of vapours/substance/aerosol use breathing protection.

6.2. Environmental precautions

Do not release into sewer/surface water/groundwater. If product enters the wastewater or sewer, contact the competent authority. Dilute with plenty of water. Prevent penetration into wastewater, sewer, wells or cellars.

6.3. Containment and cleaning methods and materials:

Ensure adequate ventilation. Clean up with liquid absorbing material (sand, tripolite, acid binder, universal binder, sawdust). Collect in suitable tanks for recovery or disposal. Discharge the collected material according to regulations.

6.4. Reference to other sections:

Information on safe use - see Chapter 7.

Information on personal protection equipment - see Chapter 8.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling of the substance or mixture:

Ensure good ventilation/air discharge at the workplace. Store in cool, dry place in tightly closed containers. Protect from heat and direct sunlight. Open and handle tanks carefully. Avoid contact with eyes and skin. Do not inhale vapour/spray. Fulfilment of BGW values and/or other limits.

Information regarding threat of fire and explosion: no special measures required.

7.2. Conditions for safe storage, including incompatible products:

Safety information sheet

SILAMOL® concentrated source of silicic acid monomers

Revision: 11-10-2014

Storage in accordance with applicable regulations. Store in cool, dry place in tightly closed containers. Protect from heat and direct sunlight. Careful when re-opening already unlocked tanks.

7.3. Specific end use:

No further relevant information available.

8. MEASURES TO CONTROL EXPOSURE/PERSONAL PROTECTION

8.1. Exposure limit values

No restrictions

8.2. Measures to control exposure

8.2.1. General protective and hygienic measures:

Keep away from food, drink and animal feed

Do not eat, drink or smoke during use.

Do not carry cleaning cloths in trouser pockets that are soaked with the product.

Remove contaminated clothing

Avoid contact with eyes and skin.

Gases/vapours/aerosols Provide adequate general and local exhaust ventilation

8.2.2 Respiratory protection:

If the BGW and/or other limits are complied with, normally no special measures are required.

8.2.3. Hand protection:

Protective gloves. To avoid skin problems, the wearing of gloves must be limited to when strictly necessary. Before any new use of the glove, it must be checked for leaks. The glove material must be impermeable and resistant to the product/substance/preparation. Select glove material considering penetration times, degrees of permeation and degradation.

8.2.4. Eye protection:

Safety goggles

8.2.5. Body protection:

Wear suitable protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 General information

Prevent

Physical state:	liquid
Colour:	transparent
Scent:	characteristic
Odour threshold:	not determined

Safety information sheet

SILAMOL® concentrated source of silicic acid monomers

Revision: 11-10-2014

9.2. Important information regarding health, safety and the environment

pH at 20°C	0,4 – 0,5
Boiling point/course	95°C
Flash point	Not applicable
Flammability (solid, gas)	Not applicable
Danger of explosion	Not applicable
Oxidizing properties	No test results available
Vapour pressure	No test results available
Relative density	1.093 g/cm ³
Solubility	Fully dissoluble
Solubility in water	Fully dissoluble
Partition coefficient: n-octanol/water	No test results available
Viscosity	5-7
Vapour density	test results available
Evaporation rate	No test results available

9.3. Other safety parameters

Miscibility	No test results available
Fat solubility	No test results available
Conductivity	No test results available
Melting point/range	0°C
Gas group	No test results available
Self ignition temperature	No test results available
Molecular formula	H ₄ O ₄ Si (syn: Si(OH) ₄ H ₄ SiO ₄)
Molecular weight	96,11 g/mol

10. STABILITY AND REACTIVITY

10.1. Reactivity

10.1.1. Chemical stability

Stable under normal conditions of use. Loses stability in conditions of pH >1,5
Loses stability when heated.

10.1.2. Hazardous reactions under certain conditions

Not applicable

10.2. Conditions to avoid

Avoid temperatures above 40°C
Avoid UV light

10.3. Materials to avoid

Alkali
Oxidising substances

10.4. Hazardous decomposition products

Not applicable

Safety information sheet

SILAMOL® concentrated source of silicic acid monomers

Revision: 11-10-2014

11. TOXICOLOGICAL INFORMATION

11.1. Toxicokinetics, metabolism and distribution

No adverse effects under normal conditions of use

11.2. Acute effects

11.2.1. Acute toxicity

Acute oral toxicity LD50 value of Si (OH) 4 (silicic acid):> 5000mg/kg Rat

11.2.2. Primary irritant effect:

On the skin: no irritant effect

In the eyes: irritant effect

12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity:

Aquatic toxicity

No further relevant information available.

12.2 Persistence and degradability:

No further relevant information available.

12.3 Bioaccumulation:

No further relevant information available.

12.4 Mobility in soil:

No further relevant information available.

12.5. Other adverse effects

No further relevant information available.

13. INSTRUCTIONS FOR DISPOSAL

Disposal of the substance poses no threat.

Suitable methods of disposal of the product and packaging

According to state and federal regulations. Rinse packaging before disposal. Empty containers which are returned to the manufacturer should not be rinsed with water. Empty containers/packaging may not be used for other purposes.

14. INFORMATION RELATING TO TRANSPORT

VN-number

IMDG, ADR, RID, ICAO/IATA

Not applicable

Class

IMDG, ADR, RID, ICAO/IATA

Not applicable

Correct loading name

IMDG, ADR, RID, ICAO/IATA

Safety information sheet

SILAMOL® concentrated source of silicic acid monomers

Revision: 11-10-2014

Not applicable

Packaging group

IMDG, ADR, RID, ICAO/IATA

Not applicable

Environmental pollution

IMDG, ADR, RID, ICAO/IATA

Not applicable

Special marking (IMDG, ADR, RID, ICAO/IATA)

Not applicable

Transport/additional information:

Not applicable

Other relevant information

No specific precautions required in relation to transport or conveyance either within or outside the company.

15. LEGALLY REQUIRED INFORMATION

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

Hazard pictograms



Key words:

Corrosive

Risk identification:

H314 Causes severe burns

H318 Causes serious eye damage

Precautions:

P280	Wear protective gloves/protective clothing/eye protection/face protection
P301+P312	IF SWALLOWED: If you feel unwell contact a POISON CENTER/doctor/... consult.
P305+P338+P351	IF IN EYES: Rinse cautiously with water for several minutes, remove contact lenses, if present and continue rinsing.
P501	Dispose of contents/packaging as per local legislation

Additional regulations, restrictions and bans:

Not applicable

Safety information sheet

SILAMOL® *concentrated source of silicic acid monomers*

Revision: 11-10-2014

Chemical safety assessment:

A chemical safety assessment has not been carried out

16. OTHER INFORMATION

Further information:

All information concerning our product are stated in good faith and in our opinion are reliable. However, there is no implicit or explicit guarantee concerning the accuracy of the data or the results that can be achieved with the data. It remains the responsibility of the user to determine the safety, toxicity and suitability himself.

Training advice

Not applicable

Recommended restrictions

Not applicable

Sources of basic information on the basis of which the safety information sheet was prepared

Legislation, databases, literature and own tests.