

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier:

Product name: Orthosilicic Acid

Trade name: SB Orthosilicic Acid

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

Product use: [SU22] Professional uses: Public domain (administration, education, entertainment, services, craftsmen); [SU1] Agriculture, forestry, fishery;

Description: No data is available on this product.

1.3 Details of the supplier of the safety data sheet:

Soil Biology Ltd

Unit 30 Branbridges Industrial Estate, East Peckham UNITED KINGDOM TN12 5HF

Tel: +44 (0) 1892 883759

Email: info@soilbiology.uk

www.soilbiology.uk

1.4 Emergency telephone number:

01892 883759

08:30 to 17:30

Call 999

National Poisons Information Service:

For medical advice or information you should contact your GP or NHS 111 (or NHS 24 in Scotland) on 111 (for 24 hour health advice)

If you are a healthcare professional with an enquiry please visit www.TOXBASE.org

SECTION 2: HAZARD IDENTIFICATION

2.1. Classification of the substance or mixture

2.1.2. Classification – EC 1272/2008

Flam. Liq. 3: H226;

Skin Irrit. 2: H315;

Eye Dam. 1: H318;

Acute Tox. 4: H332;

STOT SE 3: H335;

Aquatic Chronic 3: H412;

2.2. Label elements

Hazard pictograms



Signal word:

Danger

Hazard statement:

Flam. Liq. 3: H226 - Flammable liquid and vapour.

Skin Irrit. 2: H315 - Causes skin irritation.

Eye Dam. 1: H318 - Causes serious eye damage.

Acute Tox. 4: H332 - Harmful if inhaled.

STOT SE 3: H335 - May cause respiratory irritation.

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

Precautionary Statement:**Prevention**

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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

Response

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

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

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

Disposal

P501 - Dispose of contents/container to an approved disposal site, in accordance with local regulations.

2.3 Other hazards**Other Hazards:**

This mixture is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.2 Mixtures****EC 1272/2008**

Chemical name	Index No.	CAS No.	EC No.	REACH registration number	Conc. (%w/w)	Classification
tetraethyl silicate (Tetraethyl orthosilicate)	014-005-00-0	78-10-4	201-083-8	01-2119496195-28	70-80	Flam. Liq. 3: H226; Eye Irrit. 2: H319; Acute Tox. 4: H332; STOT SE 3: H335;
Polyether modified polysiloxane	-	134180-76-0	-	-	1-10	Acute Tox. 4: H312+H332; Eye Irrit. 2: H319; Aquatic Chronic 2: H411;
Alcohols C11-15 Secondary Ethoxylated	-	68131-40-8	-	-	10-20	Acute Tox. 4: H302+H332; Skin Irrit. 2: H315; Eye Dam. 1: H318;

Further information**Product shelf life:**

Recommended shelf life 3 years from date of delivery.

SECTION 4: FIRST AID MEASURES**4.1 Description of first aid measures****Inhalation**

Move the exposed person to fresh air.

Eye contact

Rinse immediately with plenty of water. Contact lenses should be removed.

Skin contact

Remove contaminated clothing. Wash with water and soap as a precaution.

Ingestion

DO NOT INDUCE VOMITING. Rinse mouth thoroughly.

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

Inhalation

Harmful by inhalation. May cause irritation to respiratory system. High concentration of vapour in enclosed space may cause irritation, headaches and nausea.

Eye contact

Causes serious eye damage.

Skin contact

Causes skin irritation. Prolonged contact may cause defatting of the skin.

Ingestion

May cause irritation to mucous membranes.

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

TREAT SYMPTOMATICALLY.

Inhalation

Move the exposed person to fresh air. Seek medical attention if irritation or symptoms persist.

Eye contact

Contact lenses should be removed. Rinse immediately with plenty of water. Seek medical attention if irritation or symptoms persist.

Skin contact

Seek medical attention if irritation or symptoms persist.

Ingestion

Drink 1 to 2 glasses of water. Seek medical attention if irritation or symptoms persist.

General information

If you feel unwell, seek medical advice (show the label where possible). Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

Burning produces irritating, toxic and obnoxious fumes.

5.3. Advice for firefighters

Wear suitable respiratory equipment when necessary.

Further information

In the event of a fire and/or explosion do not breath fumes. Standard procedure for chemical fires.

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear suitable protective equipment. Flammable liquid. Avoid sparks, flames, heat and sources of ignition.

6.2. Environmental precautions

Advise local authorities if large spills cannot be contained.

6.3. Methods and material for containment and cleaning up

Absorb with inert, absorbent material. Sweep up. Transfer to suitable, labelled containers for disposal. Avoid sparks, flames, heat and sources of ignition.

6.4. Reference to other sections

See section 2, 7, 8, 13 for further information.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Adopt best Manual Handling considerations when handling, carrying and dispensing.

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7.2. Conditions for safe storage, including any incompatibilities

Flammable liquid. Avoid sparks, flames, heat and sources of ignition. Avoid storing in direct Sun Light. Store in a well-ventilated place. Keep cool. Store in original container. Keep container tightly closed. Keep away from combustible material. Keep out of the reach of children.

7.3. Specific end use(s)

No data is available on this product.

Suitable packaging

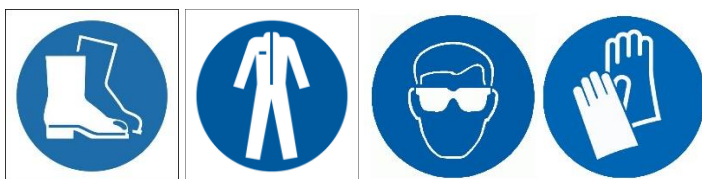
Plastic containers.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure controls.

No workplace exposure limits applicable.



8.2. Exposure controls

Adopt best Manual Handling considerations when handling, carrying and dispensing. Avoid contact with skin and eyes. Handle in accordance with good industrial hygiene and safety practice. Use appropriate personal protective equipment. Wear suitable protective clothing and eye/face protection.

8.2.1. Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective threshold limit value. Ensure eyewash stations and safety showers are close to the workstation location.

Eye / face protection

Avoid contact with eyes. Approved safety goggles.

Skin protection / Hand protection

Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

8.2.3. Environmental exposure controls

Prevent further leakage or spillage if safe to do so.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance Liquid

Colour Clear

Odour Slight

Partition coefficient No data available

Autoignition temperature No data available

Viscosity No data available

Oxidising properties No data available

Explosive properties No data available

Odour threshold No data available

pH No data available

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Melting point No data available
Initial boiling point No data available
Flash point 35 °C
Evaporation rate No data available
Flammability (solid, gas) No data available
Vapour pressure No data available
Vapour density No data available
Relative density 0.95 - 0.96 (H₂O = 1 @ 20 °C)
Solubility Miscible in water

9.2. Other information

Conductivity No data available
Surface tension No data available
Benzene Content No data available
Lead content No data available
VOC (Volatile organic compounds) No data available
Gas group No data available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Flammable liquid. Stable under normal conditions.

10.2. Chemical stability

Flammable liquid. Stable under normal conditions.

10.3. Possibility of hazardous reactions

Oxidising agents. Combustible materials.

10.4. Conditions to avoid

Avoid sparks, flames, heat and sources of ignition. Avoid storing in direct Sun Light.

10.5. Incompatible materials

Oxidising agents.

10.6. Hazardous decomposition products

No Hazardous decomposition products when stored and handled correctly. Burning produces irritating, toxic and obnoxious fumes.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

This mixture has not been tested as a whole for health effects. The health effects have been calculated using the methods outlined in Regulation (EC) No 1272/2008 (CLP).

Acute toxicity Acute Tox. 4: H332 - Harmful if inhaled.

Skin corrosion/irritation Skin Irrit. 2: H315 - Causes skin irritation.

Serious eye damage/irritation Eye Dam. 1: H318 - Causes serious eye damage.

Respiratory or skin sensitisation based on available data the classification criteria are not met.

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 STOT SE 3: H335 - 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.

11.1.2. Mixtures

No data available.

11.1.3. Hazard Information

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No data available.

11.1.4. Toxicological Information**Alcohols C11- 15 Secondary Ethoxylated**

Dermal Rat LD50: >14000 mg/kg

Oral Rat LD50: >412 mg/kg

Inhalation Rat LC50/4 h: 1.06 mg/l

SECTION 12: ECOLOGICAL INFORMATION**12.1. Toxicity****Alcohols C11- 15 Secondary Ethoxylated**

Daphnia EC50/48h: 7.3000 mg/l

Fish LC50/96h: 3.4000 mg/l

12.2. Persistence and degradability

Substance biodegrades at a moderate rate and inherently biodegradable according to the OECD guide lines.

12.3. Bioaccumulative potential

No data is available on this product.

Partition coefficient

HIT No data available

12.4. Mobility in soil

No data is available on this product.

12.5. Results of PBT and vPvB assessment

No data is available on this product.

12.6. Other adverse effects

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS**13.1. Waste treatment methods**

Dispose of waste and residues in accordance with local authority requirements.

General information

Dispose of in compliance with all local and national requirements.

Disposal of packaging

Do NOT reuse empty containers. Empty containers can be sent to landfill after cleaning, if in compliance with local and national regulations.

SECTION 14: TRANSPORT INFORMATION

Hazard pictograms

**14.1. UN number**

UN1993

14.2. UN proper shipping name

FLAMMABLE LIQUID, N.O.S. (contains Tetraethyl silicate solution)

14.3. Transport hazard class(es)

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ADR/RID 3

Subsidiary risk -

IMDG 3

Subsidiary risk -

IATA 3

Subsidiary risk –

14.4. Packing group

Packing group III

14.5. Environmental hazards

Environmental hazards No

Marine pollutant No

14.6. Special precautions for user

No additional special precautions.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

ADR/RID

Hazard ID 30

Tunnel Category (D/E)

IMDG

EmS Code F-E S-E

IATA

Packing Instruction (Cargo) 366

Maximum quantity 220 L

Packing Instruction (Passenger) 355

Maximum quantity 60 L

SECTION 15: REGULATORY INFORMATION**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Regulations REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

15.2. Chemical safety assessment

No information available.

SECTION 16: OTHER INFORMATION**Other information**

Revision This document differs from the previous version in the following areas:

8 - Skin protection - Handprotection.

8 - Eye / face protection.

8 - 8.1. Control parameters.

11 - 11.1.4. Toxicological Information.

12 - 12.1. Toxicity.

Data sources

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Classification and Procedure used to derive the classification for mixtures according to Regulation (EC) No. 1272/2008:.

Flam. Liq. 3: H226 - Flammable liquid and vapour. - Flash Point - 35 degC.

Skin Irrit. 2: H315 - Causes skin irritation. - Calculation Method.

Eye Dam. 1: H318 - Causes serious eye damage. - Calculation Method.

Acute Tox. 4: H332 - Harmful if inhaled. - Calculation Method.

STOT SE 3: H335 - May cause respiratory irritation. - Calculation Method.

Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects. - Calculation Method.

Text of Hazard Statements in Section 3

Flam. Liq. 3: H226 - Flammable liquid and vapour.

Eye Irrit. 2: H319 - Causes serious eye irritation.

Acute Tox. 4: H332 - Harmful if inhaled.

STOT SE 3: H335 - May cause respiratory irritation.

Acute Tox. 4: H312+H332 - Harmful in contact with skin or if inhaled

Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.

Acute Tox. 4: H302+H332 - Harmful if swallowed or if inhaled

Skin Irrit. 2: H315 - Causes skin irritation.

Eye Dam. 1: H318 - Causes serious eye damage.

Further information

The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.