



Material Safety Data Sheet
according 1907/2006/EC (REACH), 2015/830/EU

pH⁺

Date : 01 January 2008

Version No. 5

Review date: 03/01/2022

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

Product identifier

1.1 A. Product name:

pH⁺

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

Relevant identified uses of the substance or mixture:

pH⁺ increases the pH in hydroponic nutrient solutions.

Uses advised against:

Any use not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet

Supplier identification	Terra Aquatica
Address	4, boulevard du Biopole 32500 FLEURANCE
Phone number	+33 (0)5 62 06 08 30
E-mail address	info@eurohydro.com

1.4 Emergency telephone number

Medical services/ emergency services	999
Fire and rescue services	999
Police	101
EU Emergency call line	112
Toxicological Information Centre ORFILA (INRS)	+33 01 45 41 59 59
Toxicological Information Centre South West	+33 05 61 77 74 47

2 SECTION 2 : HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Reg. 1272/2008/CLP	In accordance with Regulation No. 1272/2008 (CLP), the product is considered dangerous. Skin Corr. 1, H314 Eye Dam. 1, H318
--------------------	---

Additional information :

Hazards for humans	Causes severe skin burns and eye damage.
Environmental hazards	None
Physico-chemical hazards	None
Other hazards	None

Labelling elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictograms



2.2

Signal word	DANGER
Substances	Potassium carbonate Potassium silicate
Hazard statements H:	H314 Causes skin burns H318 Causes serious eye damage.
Precautionary statements P:	Phrases P P101 If you consult a doctor, keep the container or label available P102 Keep out of reach of children P103 Read the label before use P280 Wear protective gloves. Wear eye or face protection. Wear protective clothing. P314 In case of discomfort, consult a doctor. P405 - Store under lock and key.

2.3 Other hazards

None

3 SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances Not applicable

3.2 Mixtures pH⁺
Name

Description The product is an aqueous solution containing potassium carbonate and potassium silicate

Chemical name	Weight % content (or range)	CAS NUMBER
Potassium Carbonate	>10 <20	CAS: 584-08-7
Potassium Silicate	>0.3 <1.2	CAS: 1312-76-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

4 SECTION 4 : FIRST AID MEASURES

In general, if in doubt or if symptoms persist, seek medical attention. Do not give anything by mouth to an unconscious person.

4.1

Description of first aid measures

Following eye contact	Wash immediately with plenty of water for at least 20 minutes, keeping the eyelids well apart, and consult a specialist. If victim is wearing contact lenses, remove them.
Following skin contact	Wash with plenty of soapy water. Wash impregnated clothing or remove with gloves. Seek medical attention.
Following ingestion	Do not induce vomiting except under medical advice, seek medical attention immediately by showing the product label. Rinse mouth with water. If victim is conscious, give small amounts of water to drink, unless the victim is nauseated, to prevent vomiting.
Following inhalation	Call a doctor. Move victim to fresh air. Keep the victim warm and at rest, in a position that allows them to breathe comfortably. If smoke is suspected, the rescuer should wear an appropriate mask or self-contained breathing apparatus.
Self-protection of the first aider	Depending on the first aid setting, wear appropriate protective equipment including a mask or filtered respirator and, if necessary, operate in the presence of another co-worker. Always wear protective gloves and a resuscitation mask in case of artificial respiration. Wash hands thoroughly after giving first aid. If your clothing becomes contaminated with a chemical during first aid procedures, change it.
Other information	For further details of first aid administration, including but not limited to more serious health effects, the doctor may consult the Toxicological Information Centre, hotline: see section 1.4
4.2 Most important symptoms and effects, both acute and delayed	The pH ⁺ causes irritation, chemical (alkaline) burns of the skin or eyes or degreasing of the skin depending on the duration and intensity of exposure. Potassium carbonate is generally considered a safe food additive. Its toxicity is due to its high alkalinity in concentrated form.
4.3 Indication of any immediate medical attention and special treatment needed	Note to the attending physician Symptomatic treatment required. Immediately contact a specialist for the treatment of poisonings if large quantities have been ingested or inhaled. Specific treatments No special treatment.

5 SECTION 5 : FIREFIGHTING MEASURES

Extinguishing media

The product is not flammable. Fire hazard low due to the flammability characteristics of the product under normal storage, handling and use conditions.

Suitable extinguishing media:

In the event of a nearby fire or continued combustion, caused by improper handling, storage or use, the following extinguishing media may be used: carbon dioxide (CO₂), foam, chemical powders, and in the event of a widespread fire, also water spray.

Inappropriate extinguishing media:

In case of fire, do not use: Water jet

Special hazards arising from the substance or mixture

The product does not present a risk of fire or explosion under normal conditions of storage, handling and use.

A fire in the surrounding space will often produce thick black smoke.

Possible thermal decomposition products are carbon dioxide/carbonic gas/
carbon monoxide / metal oxide / metal oxides

Fire water contaminated with this product should be contained and prevented from being

discharged to a watercourse or sewer.

Translated with www.DeepL.com/Translator (free version)

Advice for firefighters

Protective actions to be taken when fighting fires

Quickly isolate the site by evacuating all persons from the area near the incident in case of fire. Do not take any action involving a personal risk or in the absence of adequate training. Keep containers away from fire if it can be done without risk. Use water or water spray to keep containers exposed to fire cool.

5.3

Appropriate protective equipment

The product is not combustible. In the event of a fire in the surrounding area, appropriate extinguishing media and protective equipment may be used for the other materials present (full protective clothing and personal respiratory equipment), in accordance with EN469 for a basic level of protection against chemical incidents. Have a minimum of emergency facilities or intervention elements (fire blankets, medicine kit, etc.) in accordance with Directive 89/654/EC.

Other information

Additional provisions:

Respond in accordance with the Internal Emergency Plan and the Fact Sheets on Accident and Other Emergency Response. Remove all sources of ignition. In case of

5.4

fire, if possible refrigerate containers and storage tanks for products that may ignite and explode as a result of high temperatures. Avoid spilling products used to extinguish the fire in the aquatic environment.

6 SECTION 6 : ACCIDENTAL RELEASE MESURES

6.1 Personal precautions, protective equipment and emergency procedures

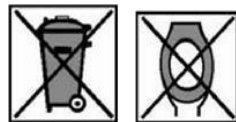
For non-emergency personnel

Quickly isolate the site by evacuating all persons from the area near the incident in case of fire. Do not take any action involving a personal risk or in the absence of adequate training. Keep containers away from fire if it can be done without risk. Use water or water spray to keep containers exposed to fire cool.

For emergency responders

Responders will be equipped with personal protective equipment appropriate to the nature of the hazard. (See Section 8)

Environmental precautions



6.2

Avoid contamination of soil, sewers, surface water and groundwater. If this happens, inform the competent authorities.

Methods and material for containment and cleaning up

6.3

For containment:

Sewer and dike coverage

For cleaning up:

Restrict access; isolate the risk area and prevent entry. Do not touch or walk through spilled liquid. If possible, eliminate the leak. Prevent entry into storm sewers or waterways. If possible, isolate, dam or dike and try to capture the equipment. Suction with a pump or

vacuum truck. Use non-combustible absorbent material, such as sand, earth, vermiculite or diatomaceous earth. Contaminated absorbent material may present the same hazard as the spilled product. If it is impossible to contain the material, dilute with large amounts of water. Dispose through a licensed waste disposal contractor. Comply with environmental laws for waste disposal.

Other information:

Do not put the spilled product in contact with combustible or incompatible materials. Cleaning personnel must wear equipment to protect skin and eyes and to protect themselves from vapours

Reference to other sections

Collect the remains in an identified container: see point 13 for disposal.

6.4

Personal protective equipment: see section 8

Withdrawal considerations: see section 13.

See section 1 for emergency contact information.

7 SECTION 7 : HANDLING AND STORAGE

Precautions for safe handling

7.1

Wear appropriate personal protective equipment (see section 8). Do not get in eyes, on skin or clothing. Do not breathe vapours or mist. Do not ingest. If during normal use the product presents a respiratory hazard, use only with adequate ventilation or wear suitable respiratory equipment. Store in original container or an approved substitute made of compatible material, tightly closed when not in use. Keep away from acids. Empty containers retain product residue and may be hazardous. Do not reuse the container.

General Recommendations :

Keep away from flames and sparks. Do not smoke. Keep away from heat and other sources of ignition.

Do not eat, drink or smoke in work areas.

Wash hands after each use.

Conditions for safe storage, including any incompatibilities

7.2

Store in original container, out of direct sunlight, in a cool, dry, well-ventilated area, away from incompatible materials (see section 10) and food and drink. Store under lock and key. Store separately from acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully closed and kept in an upright position to prevent leakage. Do not store in unlabelled containers. Use an appropriate containment method to avoid environmental contamination.

Close containers before and after each use to avoid sources of moisture or heat. Store in areas with waterproof pavement.

7.3

Specific end use(s)

No specific end uses.

8 SECTION 8 : EXHIBITION CONTROLS/INDIVIDUAL PROTECTION

Control parameters

8.1

No applicable.

Respect good industrial hygiene practices

Exposure controls

Appropriate engineering controls

If user operations generate dust, fumes, gases, vapours or mist, use local exhaust ventilation or other engineering controls to keep worker exposure to air contaminants below recommended or regulatory limits.

Individual protection measures, such as personal protective equipment

Use individual protection placed on the market in accordance with the provisions of Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016.

Eye/face protection	Personal protective equipment must be adapted to the risk, kept clean and properly maintained in compliance with the provisions of the labour code. It is necessary to wear protective goggles complying with standard NF EN166 before handling chemicals.
Skin protection	Hands: Wear suitable protective gloves in case of prolonged or repeated contact with the product. Use suitable protective gloves resistant to chemical agents in accordance with NF EN374.
Respiratory protection	Ensure adequate ventilation, especially in enclosed areas. If a risk assessment recommends it, wear appropriate respiratory equipment.
Body protection	Wear appropriate protective clothing. After contact with the product, all parts of the body that have been in contact with the product must be washed.
Environmental exposure controls	No data available

9 SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Physical state: All pH ⁺ compounds are in aqueous solution. Color: pale blue, light blue
Odour	No odor
pH	11.5-11.9
Melting point	Not determined
Freezing point	Not determined
Initial boiling point and boiling range	100°C
Flash point	Not determined
Evaporation rate	Not determined
Flammability (solid, gas)	Non inflammable
Upper/lower flammability or explosive limits	Not applicable
Vapour pressure	Not determined
Vapour density	Not determined
Relative density	1.12
Solubility(ies) 20°C	Entirely soluble
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature	Not determined
Decomposition temperature	Not determined
Viscosity	Not determined
Explosive properties	Not determined
Oxidising properties	Not determined
Refraction index	Not determined
Rotary power	Not determined

9.2 Other information

No other information

10 SECTION 10 : STABILITY AND REACTIVITY

10.1	Reactivity	No specific reactivity test data are available for this product or its components.
10.2	Chemical stability	The product is stable at room temperature in closed packages and under normal storage and handling conditions.
10.3	Possibility of hazardous reactions	No risk of dangerous reactions under normal use and storage conditions.
10.4	Conditions to avoid	No special conditions to avoid. Follow usual precautionary practices regarding chemicals.
10.5	Incompatible materials	Oxidizing materials, metals
10.6	Hazardous decomposition products	Under normal storage and use conditions, no hazardous decomposition products should occur.

11 SECTION 11 : TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

a) acute toxicity; (b) skin corrosion/irritation; (c) serious eye damage/irritation; (d) respiratory or skin sensitisation; (e) germ cell mutagenicity; (f) carcinogenicity; (g) reproductive toxicity; (h) STOT-single exposure; (i) STOT-repeated exposure; (j) aspiration hazard	a) (a) Potassium carbonate LD50 Oral - Rat - Dose 1870 mg/kg b,d,e,f,g,h,I,j : No data available
Symptoms related to the physical, chemical and toxicological characteristics	Ingestion: No known significant effects or critical hazards. Inhalation : No known significant effects or critical hazards. Skin Exposure: Causes severe burns. Eye Exposure: Causes severe eye damage
Delayed and immediate effects as well as chronic effects from short- and long-term exposure	Ingestion: Stomach ache Inhalation: No known significant effects or critical hazards. Skin Exposure: Pain or irritation, redness, blistering may occur. Eye Exposure: pain, tearing, redness
Interactive effects	No known significant effects or critical hazards.
Absence of specific data	No data available
Mixtures	No data available
Mixture versus substance information	Comply with good industrial hygiene practices

12 SECTION 12 : ECOLOGICAL INFORMATION

12.1 Toxicity No known significant effects or critical hazards.

Product/ingredient name	Result	Species	Exposure
Potassium carbonate	Acute LC50 630000 µg/L	Crustaceans - Ceriodaphnia	48 hours
	Fresh water Acute LC50	dubia	48 hours
	650000 µg/L Fresh water	Daphnia - Daphnia magna	

12.2	Persistence and degradability	No data available to date to the best of our knowledge
12.3	Bioaccumulative potential	No data available to date to the best of our knowledge
12.4	Mobility in soil	No data available to date to the best of our knowledge. Waste generation should be avoided or minimized as much as possible, and the product should not be discharged into sewers or waterways.
12.5	Results of PBT and vPvB assessment	Not Applicable Not Applicable
12.6	Other adverse effects	No known significant effects or critical hazards.

13 SECTION 13 : DISPOSAL CONSIDERATIONS

13.1	Waste treatment methods	<p>Do not flush to sewers or waterways.</p> <p>Waste: Waste management shall be carried out without endangering human health and without harming the environment, and in particular without creating a risk to water, air, soil, fauna and flora.</p> <p>Recycle or dispose of in accordance with current legislation, preferably by a licensed collector or company.</p> <p>Disposal of the product/packaging: Disposal into sewers or waterways is prohibited. Residues and empty containers must be handled and disposed of in accordance with the relevant local/national legislation in force.</p> <p>Follow the provisions of Directive 2008/98/EC on waste management.</p> <p>Packaging: The generation of waste should be avoided or minimised as far as possible. Packaging waste should be recycled. Incineration or burial should only be considered when recycling is not possible.</p>
	Waste codes / waste designations according to LoW:	Not determined

14 SECTION 14 : TRANSPORT INFORMATION

14.1	UN number	UN3266
14.2	UN proper shipping name	CORROSIVE ORGANIC LIQUID, BASIC, N.O.S. (Potassium silicate, anhydrous)
14.3	Transport hazard class(es)	8 
	ADR	UN3266 - Tunnel code : (E)
	IMDG	Emergency Hours: F-A, S-B
	OACI/IATA	
14.4	Packing group	III

14.5	Environmental hazards	No
14.6	Special precautions for user	Transportation with local users: Ensure that people transporting the product are aware of the measures to be taken in the event of an accident or accidental spill.

15 SECTION 15 : REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1	Reg. 1272/2008/CE	The product does not contain substances that can be classified as carcinogenic. 1 or 2 according to Reg.1272/2008/EC and subsequent updates.
	Reg. 830/2015/CE (REACH)	Not applicable
	Special hazards	None
15.2	Chemical safety assessment	Evaluation not yet completed

16 SECTION 16 : OTHER INFORMATION

16.1	Abbreviations and acronyms:	<p>ETA = Acute Toxicity Estimation</p> <p>CLP = Regulation 1272/2008/EC on classification, labelling and packaging of substances and mixtures</p> <p>DNEL = Derived no-effect dose</p> <p>DMEL = Derived no-effect dose</p> <p>EUH = Specific hazard statement CLP</p> <p>CPSE = Predicted no-effect concentration</p> <p>RRN = REACH registration number</p> <p>PTB = Persistent, Toxic and Bioaccumulative</p> <p>tPtB = Very persistent and very bioaccumulative</p> <p>bw = Body mass</p>
16.2	Key literature references and sources for data	<p>Regulation (EC) 1907/2006 of the European Parliament (REACH)</p> <p>Regulation (EC) 1272/2008 of the European Parliament (CLP)</p> <p>Regulation (EC) 790/2009 of the European Parliament (I Atp. CLP)</p> <p>Regulation (EC) 453/2010 of the European Parliament Regulation (EC) 286/2011 of the European Parliament (II Atp. CLP)</p> <p>The Merck index. Ed. 10 Handling and chemical safety</p> <p>Niosh - Register of toxic effects of chemical substances</p> <p>INRS - Toxicological Data Sheet</p> <p>Patty - Industrial hygiene and toxicology</p> <p>N.I. Sax - Dangerous properties of Industrial Materials - 7 Ed., 1989</p> <p>ECHA website</p>
	Procedure used to establish classification in accordance with Regulation (EC) No 1272/2008 [CLP/GHS].	<p>H314 Causes skin burns.</p> <p>H318 Causes severe eye damage.</p> <p>Based on tests</p>

	Full text H-phrases	H314 Causes severe skin burns and eye damage. H318 Causes severe eye damage.
16.3	Indication of changes:	Date of revision: 03/01/2022 Previous version date: 25/08/2020 Version :5
16.4	Note	Modification: Section 1.3, Company name This safety data sheet complies with the requirements laid down in Reg. 830/2015/EU. It does not in any way exempt the user from knowing and applying all the documents that govern his activity. The user will take under his responsibility the precautions related to the specific use of the product. All the regulatory requirements mentioned are simply intended to help the recipient to assume his responsibilities. This list should not be considered exhaustive. This data sheet supplements the technical instructions for use but does not replace them. The information in this safety data sheet has been compiled by Terra Aquatica on the basis of its current knowledge (safety data sheet for the active ingredients compiled by the manufacturer and other bibliographical data) as of the date indicated. It is given in good faith. In addition, the user's attention is drawn to the possible risks involved when a product is used for purposes other than those for which it was created. The recipient must ensure that he is not liable for anything other than what is stated in the texts other than those mentioned. The information describes the safety aspects of the product. It is not intended to guarantee specific properties. It is the responsibility of our customers to observe the applicable regulations.