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

pH -

Date : 01 June 2016 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- decreases 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.

Additional information :

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

Labelling elements

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

Hazard pictograms

Signal word	DANGER
Substances	Nitric Acide

2.2

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.

2.3 Other hazards

None

3 SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances Not applicable

3.2 Mixtures

Name **pH-**

Description pH- consists of nitric acid, phosphoric acid and citric acid.

Chemical name	Weight % content (or range)	CAS NUMBER
Citric acid	8.5	5949-29-1
Phosphoric acid	8.9	7664-38-2
Nitric acid	7.2	7697-37-2

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, keeping the eyelids well apart, and consult a specialist.
	Following skin contact	Rinse the irritated area thoroughly with soapy water. Remove contaminated clothing.
	Following ingestion	Do not induce vomiting, seek medical attention immediately by showing the product label.
	Following inhalation	Move the victim to fresh air. Keep her warm and at rest. Seek medical attention if breathing is impaired.
	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, 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**	No known effect
4.3	**Indication of any immediate medical attention and special treatment needed**	If decomposition products are inhaled in a fire, symptoms may be delayed. The exposed person may need to be placed under medical supervision for 48 hours.

5 SECTION 5 : FIREFIGHTING MEASURES

5.1	**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
5.2	**Special hazards arising from the substance or mixture**	Due to its flammability characteristics, the product does not contain a fire hazard under normal conditions of storage, handling and use. A fire in the surrounding space will often produce thick black smoke. Exposure to compositional products may result in health hazards. Do not breathe fumes. Decomposition products may include the following materials: oxides of nitrogen phosphorus oxides Carbon Dioxide Carbon monoxide This product is toxic to aquatic life. Fire water contaminated with this product should be contained and prevented from being discharged to a watercourse or sewer.

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 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.

5.4

6 SECTION 6 : ACCIDENTAL RELEASE MESURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

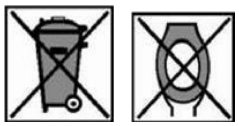
Ensure good ventilation.

In case of accidental release of a large quantity, evacuate all personnel and allow access only to trained operators with appropriate personal protective equipment. (See section 8)

For emergency responders

Responders will be equipped with appropriate personal protective equipment. (See section8)

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 coverage

For cleaning up:

Mechanically collect the spilled product and remove the remains by water jets. Provide sufficient ventilation of the spillage area. Contaminated material must be disposed of in accordance with point 13.

Reference to other sections

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

Personal protective equipment: see section 8

6.4

Withdrawal considerations: see section 13.

See section 1 for emergency contact information.

7 SECTION 7 : HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid formation of suspended particles and dispersion of the product in the air.

Provide adequate ventilation in areas where suspended particles develop.

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

Do not eat, drink or smoke in work areas.

Wash hands after each use.

7.2 Conditions for safe storage, including any incompatibilities

Ensure adequate local ventilation or exhaust.

Store container upright, tightly closed in a cool, dry, well-ventilated place. Keep under lock and key.

Close containers before and after each use to avoid sources of moisture or heat. Store in labelled bottles.

Store in waterproof areas if possible.

7.3 Specific end use(s)

No specific end uses.

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

8 SECTION 8 : EXHIBITION CONTROLS/INDIVIDUAL PROTECTION

8.1 Control parameters

No applicable.

Respect good industrial hygiene practices

8.2 Exposure controls

Appropriate engineering controls

No special controls. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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.

Personal protective equipment must be adapted to the risk, kept clean and properly maintained in compliance with the provisions of the labour code.

Eye/face protection

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

Assurer une ventilation adéquate, surtout dans les endroits clos.

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: yellowish

Odour	None
pH	0.12
Melting point	-8ºC
Freezing point	Not determined
Initial boiling point and boiling range	104°C
Flash point	Not determined
Evaporation rate	Not determined
Flammability (solid, gas)	Non inflammable
Upper/lower flammability or explosive limits	Not applicable
Vapour pressure	2.3 Kpa (17.5mm Hg)
Vapour density	Not determined
Relative density	1.13
Solubility(ies) 20°C	Entirely soluble
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature	Not determined
Decomposition temperature	Not determined
Viscosity	Kinematics (Room temperature) 0.01 cm2/s
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 particular risk of reaction with other materials under normal conditions of use.

10.2 **Chemical stability**

pH- is stable at room temperature in closed packages and under normal storage and handling conditions.

No hazardous polymerization can be produced by any of these components.

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**

At very high temperatures, decomposition products are formed: phosphorus oxide and nitrogen oxide.

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

Estimated acute toxicity	Value
By mouth	58027.1mg/kg

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Skin contact : Pain or irritation redness blistering may occur - causes severe burns

Eye contact : Pain and tearing redness - causes severe eye damage

Delayed and immediate effects as well as chronic effects from short- and long-term exposure

No known symptoms

Interactive effects

No known significant effects or critical hazards.

Absence of specific data

No data available

Mixtures

No data available

Mixture versus substance information

No known adverse effects or symptoms resulting from exposure to the mixture or its components.

12 SECTION 12 : ECOLOGICAL INFORMATION

12.1 Toxicity

Product name	Result	Species	Exposure
Citric acid	LD50 160000µg/l sea water	Crustaceae: ***Carcinus maenas*** adult	48H

12.2 Persistence and degradability

No data available to date to the best of our knowledge

12.3 Bioaccumulative potential

Product name	$LogP_{ow}$	FBC	Potential
Citric acid	-1.8	-	Low

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

The product can be disposed of we would do it with any industrial fertilizer. Follow local legislation.

Do not discharge into sewers or waterways.

Waste: Waste management should be carried out without endangering human health and without harming the environment, in particular without creating a risk to water, air, soil, fauna and flora.

Recycle or dispose of in accordance with current legislation, preferably by a licensed

		collector or company. 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. Follow the provisions of Directive 2008/98/EC on waste management.
	Waste codes / waste designations according to LoW:	Not determined

14 SECTION 14 : TRANSPORT INFORMATION

14.1	**UN number**	UN3264
14.2	**UN proper shipping name**	INORGANIC LIQUID CORROSIVE, ACIDIC, N.O.S. (Nitric acid, Phosphoric phosphoric acid)
14.3	**Transport hazard class(es)**	8 
	ADR **IMDG** **OACI/IATA**	ADR/RID Tunnel code (E) IMDG : Marine pollutant : No Emergency schedules (EmS) : F-A, S-B
14.4	**Packing group**	II
14.5	**Environmental hazards**	Non-hazardous transport Transport with local purposes: always transport in correct and safe packaging. Make sure that the persons transporting the product know the measures to be taken in case of accident or accidental spillage
14.6	**Special precautions for user**	Non-hazardous transport.

15 SECTION 15 : REGULATORY INFORMATION

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

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:**	ETA = Acute Toxicity Estimation CLP = Regulation 1272/2008/EC on classification, labelling and packaging of substances and mixtures DNEL = Derived no-effect dose DMEL = Derived no-effect dose EUH = Specific hazard statement CLP CPSE = Predicted no-effect concentration RRN = REACH registration number PTB = Persistent, Toxic and Bioaccumulative tPtB = Very persistent and very bioaccumulative bw = Body mass
16.2	**Key literature references and sources for data**	Regulation (EC) 1907/2006 of the European Parliament (REACH) Regulation (EC) 1272/2008 of the European Parliament (CLP) Regulation (EC) 790/2009 of the European Parliament (I Atp. CLP) Regulation (EC) 453/2010 of the European Parliament Regulation (EC) 286/2011 of the European Parliament (II Atp. CLP) The Merck index. Ed. 10 Handling and chemical safety Niosh - Register of toxic effects of chemical substances INRS - Toxicological Data Sheet Patty - Industrial hygiene and toxicology N.I. Sax - Dangerous properties of Industrial Materials - 7 Ed., 1989 ECHA website
16.3	**Indication of changes:**	Date of revision: 03/01/2022 Previous version date: 15/02/2020 Version :5 Modification: Section 1.3, Company name
16.4	**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:**	This Safety Data Sheet complies with the requirements laid down in Reg. 830/2015/EU. It does not 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.

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.
Enviromental hazards	None
Physico-chemical hazards	None
Other hazards	None

Labelling elements

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

Hazard pictograms

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.

2.2

2.3 Other hazards

None

3 SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Name pH^{+}

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

5.1 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 (CO_2), 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

5.2 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 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.

5.4

6 SECTION 6 : ACCIDENTAL RELEASE MESURES

6.1 Personal precautions, protective equipment and emergency procedures

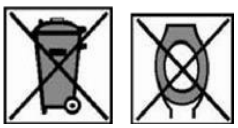
For non-emergency personnel

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
6.4	**Reference to other sections**	Collect the remains in an identified container: see point 13 for disposal. Personal protective equipment: see section 8 Withdrawal considerations: see section 13. See section 1 for emergency contact information.

7 SECTION 7 : HANDLING AND STORAGE

7.1	**Precautions for safe handling**	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.
7.2	**Conditions for safe storage, including any incompatibilities**	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

8.1	**Control parameters**	No applicable. Respect good industrial hygiene practices
8.2	**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.

	Personal protective equipment must be adapted to the risk, kept clean and properly maintained in compliance with the provisions of the labour code.
Eye/face protection	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,l,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 Fresh water Acute LC50 650000 µg/L Fresh water	Crustaceans - Ceriodaphnia dubia Daphnia - Daphnia magna	48 hours 48 hours

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**	Do not flush to sewers or waterways. 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. Recycle or dispose of in accordance with current legislation, preferably by a licensed collector or company. 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. Follow the provisions of Directive 2008/98/EC on waste management. 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.
	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 
14.4	**ADR** **IMDG** **OACI/IATA** **Packing group**	UN3266 - Tunnel code : (E) Emergency Hours: F-A, S-B 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

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

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

Modification: Section 1.3, Company name

16.4 Note

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.

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

pH- Powder

Date : 01 Janvier 2007 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- Powder
B. CE Number
C. CAS

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

Relevant identified uses of the substance or mixture:

pH- Powder lowers the pH of the product 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

Product definition	Mono-constituent substance
Reg. 1272/2008/CLP	In accordance with Regulation No. 1272/2008 (CLP), the product is considered dangerous. Skin Corr./Irrit. 1B H314
Additional information :	
Hazards for humans	Upon contact with water, it forms phosphoric acid and urea, which can cause severe burns and eye contact.
Enviromental hazards	None
Physico-chemical hazards	None
Other hazards	None

Labelling elements

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

Hazard pictograms

Signal word	DANGER
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 P260-a Do not breathe dust P280 Wear protective gloves. Wear eye or face protection. Wear protective clothing. P314 In case of discomfort, consult a doctor.

2.2

2.3 Other hazards

None

3 SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Mono-constituent substance

Chemical name	Weight % content (or range)	CAS NUMBER
Urea phosphate	100%	4861-19-2

3.2 Mixtures

Name **Not applicable**

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	Immediately flush eyes, including under the eyelids, with plenty of clean, clear water for at least 15 minutes. Check if the victim is wearing contact lenses and if so, remove them. Consult a doctor immediately.
Following skin contact	Rinse the irritated area thoroughly with water for at least 15 minutes. Remove contaminated clothing.

	Following ingestion	Consult a doctor immediately. Chemical burns should be treated promptly by a doctor. Rinse the mouth with water. If a person has swallowed this product and is conscious, give small amounts of water to drink. Call a doctor if the adverse health effects persist or worsen. Do not induce vomiting unless directed by medical personnel.
	Following inhalation	If inhaled, move to fresh air. Consult a doctor immediately. If it is suspected that fumes are present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.
	Self-protection of the first aider	No action should be taken that involves an individual risk or in the absence of appropriate training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It can be dangerous for the person assisting a victim to practice mouth-to-mouth. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
	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**	**Potential acute health effects:** Eye contact: Causes serious eye damage. Inhalation: Possible release of gases, vapours or dust that are very irritating or corrosive to the respiratory system. Skin contact: Causes severe burns. Ingestion : May cause burns to the mouth, throat and stomach. **Signs/symptoms of overexposure:** Eye contact: Adverse symptoms may include the following: pain, tearing, redness Inhalation: No specific data Skin contact: Pain or irritation, redness, blistering may occur Ingestion : No specific data.
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

5.1	**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 (CO_2), 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

Hazards due to the substance or mixture:

The product does not present a specific risk of fire or explosion.

Risk related to thermal decomposition products:

5.2

A fire in the surrounding area will often produce thick black smoke. Exposure to compositional products may pose health risks. Do not breathe dust, vapours or fumes released by the combustion of the products.

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 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.

5.4

6 SECTION 6 : ACCIDENTAL RELEASE MESURES

6.1 Personal precautions, protective equipment and emergency procedures

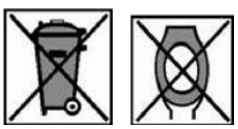
For non-emergency personnel

No action should be taken that involves an individual risk or in the absence of appropriate training. Evacuate the area. Prevent access to persons not required and not wearing protective clothing. DO NOT TOUCH or walk in spilled material. Ensure adequate ventilation. Wear appropriate respiratory protection when the ventilation system is inadequate. Wear protective equipment.

For emergency responders

If specific clothing is required to handle the spill, refer to Section 8 for appropriate and inappropriate materials. See also the information contained in "For personnel other than response personnel"

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 coverage

	For cleaning up:	**Small accidental spill:** Keep containers away from the accidental spill area. Vacuum with a HEPA filter vacuum cleaner or sweep up spilled material with a broom and place in a properly labelled waste container. Dispose by an authorized waste collection company. The contamination-free product can be used for its intended application. **Large accidental spill:** Immediately contact emergency personnel. Keep containers away from the accidental spill area. Approach the fumes in the same direction as the wind. Block any possible entry into sewers, watercourses, cellars or confined areas. Avoid the formation of dust. Do not sweep dry. Vacuum with equipment equipped with a HEPA filter and place it in a properly labelled waste container. Disposal by an authorized waste collection company. Note: See section 1 for emergency contact and see section 13 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
6.4	**Reference to other sections**	Collect the remains in an identified container: see point 13 for disposal. Personal protective equipment: see section 8 Withdrawal considerations: see section 13. See section 1 for emergency contact information.

7 SECTION 7 : HANDLING AND STORAGE

7.1	**Precautions for safe handling**	Wear appropriate personal protective equipment (see Section 8). Do not put in contact with eyes, skin or clothing. Do not ingest. If during normal use the substance presents a respiratory hazard, adequate ventilation or the use of a respirator is mandatory. Keep in the original container or in another approved substitute container made of a compatible material and kept hermetically sealed when not in use. Empty containers retain product residues and can be dangerous. Do not reuse the containers. **Advice on professional hygiene in general:** It is prohibited to eat, drink or smoke in areas where this product is handled, stored or used. It is recommended that staff wash their hands and face before eating, drinking or smoking. Remove contaminated clothing and protective equipment before entering a food court. See also section 8 for more information on hygiene measures.
7.2	**Conditions for safe storage, including any incompatibilities**	Store in accordance with local regulations. Store in the original container away from direct sunlight in a dry, cool and well-ventilated place away from incompatible materials (see section 10). Keep under lock and key. Keep container tightly closed when not in use. Containers that have been opened must be carefully closed again and kept in an upright position to prevent leaks. Do not store in unlabelled containers. Use an appropriate container to avoid contamination of the surrounding environment. Surround storage facilities with containment dykes to prevent soil and water pollution in the event of a spill.
7.3	**Specific end use(s)**	No specific end uses. Good practices: keep in closed containers. Close containers before and after each use to avoid sources of moisture or heat. Store in areas with waterproof pavement.

8 SECTION 8 : EXHIBITION CONTROLS/INDIVIDUAL PROTECTION

8.1	**Control parameters**	Occupational exposure limits: No known exposure limit values.

DNEL/DMEL

Product/component name	Type	Exposure	Value	Population	Effects
Urea phosphate	DNEL	Long term Inhalation	2.92mg/m³	Operators	Systemic

8.2 Exposure controls

Provide adequate air exchange and/or ventilation in the workshops. Consult a doctor if necessary. Wear suitable gloves and eye/face protection. Wear a respirator with a dust filter. Avoid contact with skin, eyes and clothing.

Appropriate engineering controls

If user handling causes dust, fumes, gases, vapours or mist, use enclosed enclosures, source exhaust ventilation, or other integrated automatic control systems to keep the technician's exposure threshold to airborne contaminants below recommended or legal limits.

Individual protection measures, such as personal protective equipment

Hygiene measures:
Wash hands, forearms and face thoroughly after handling chemicals, before eating, smoking and using the toilet, and at the end of the workday. It is recommended to use appropriate techniques to remove potentially contaminated clothing. Wash contaminated clothing before reuse. A washing facility or water must be available for cleaning the eyes and skin.
Use individual protections 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.
Personal protective equipment must be adapted to the risk, kept clean and properly maintained in accordance with the provisions of the Labour Code.

Eye/face protection

Use eye protection in accordance with an approved standard whenever a risk assessment indicates that it is necessary to avoid exposure to liquid splashes, fine particles, gases or dust. Recommended: CEN tight-fitting waterproof glasses: EN166

Skin protection

The use of impermeable and chemical-resistant gloves that meet an approved standard is always mandatory when handling chemicals if a risk assessment indicates it.
> 8 hours (time before piercing): Gloves: It is recommended to wear protective gloves thicker than 0.35mm when using this product for normal use.

Respiratory protection

When room ventilation is insufficient, wear respiratory protective equipment.
Recommended: The P2 filter (EN 143)

Body protection

Personal protective equipment for the body should be chosen according to the task to be performed and the risks involved, and it is recommended to have it validated by a specialist before handling the product.

Environmental exposure controls

It is important to test emissions from ventilation systems or manufacturing equipment to ensure that they comply with the requirements of environmental protection legislation. In some cases, it will be necessary to equip the manufacturing equipment with a gas scrubber or filter or to technically modify it in order to reduce emissions to acceptable levels.

9 SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Physical state: pH Down Sec is in crystalline (solid) powder form Color: White
Odour	No odor
pH	2.7 - 2.8[Conc. (% weight / weight): 0.5 g/l]

	Melting point	>200°C
	Freezing point	Not determined
	Initial boiling point and boiling range	>200°C
	Flash point	Not determined
	Evaporation rate	Not determined
	Flammability (solid, gas)	Non inflammable
	Upper/lower flammability or explosive limits	Not determined
	Vapour pressure	< 0,1 hPa
	Vapour density	Not determined
	Relative density	1,77 @ 20 °C
	Solubility(ies) 20°C	> 100 g/l @ 20 °C Soluble in the following substances: cold water
	Partition coefficient: n-octanol/water	-1,73 @ 20 °C
	Auto-ignition temperature	Not determined
	Decomposition temperature	Not determined
	Viscosity	Not determined
	Explosive properties	None
	Oxidising properties	None
	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**	Dry pH- Powder 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**	Avoid any contamination, including contamination by metals, dust or organic substances.
10.5	**Incompatible materials**	No specific data.
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;	a) Acute toxicity: DL50/oral/rat = 2600mg/kg. 423 Acute oral toxicity - Acute toxicity class method

(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	Conclusion/Summary: Non-toxic. b) Irritation and corrosion: Causes burns c) Causes serious eye damage d) Possible irritation of the respiratory system. (e) NO mutagenic effect (f) NO carcinogenic effect (g) No known significant effects or critical hazards (h) None (i) None (j) Possible release of gases, vapours or dust that are very irritating or corrosive to the respiratory system.
Symptoms related to the physical, chemical and toxicological characteristics	Inhalation, ingestion : No known symptoms Skin contact : Pain or irritation redness blistering may occur Eye contact : Pain and tearing redness
Delayed and immediate effects as well as chronic effects from short- and long-term exposure	Health effects are considered unlikely if the product is used as recommended
Interactive effects	Data not known
Absence of specific data	No data available
Mixtures	No data available
Mixture versus substance information	No known adverse effects or symptoms resulting from exposure to the mixture or its components.
Conclusion	Non toxic

12 SECTION 12 : ECOLOGICAL INFORMATION

12.1	**Toxicity**	No known significant effects or critical hazards.
12.2	**Persistence and degradability**	Easily biodegradable by plants and soil. The product does not show any bioaccumulation phenomena.
12.3	**Bioaccumulative potential**	It cannot be expected to bioaccumulate in the environment through food chains.
12.4	**Mobility in soil**	Not available. Low expected mobility in the ground, according to the log Koc.
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**	**Product** : It is recommended to avoid or reduce waste generation as much as possible. Do not dispose of significant quantities of residual product waste through sewers. Treat them in an appropriate wastewater treatment plant. Dispose of surplus and non-recyclable products by an authorized waste collection company. The disposal of this product, solutions and by-products must always comply with legal requirements for environmental protection and waste disposal as well as the requirements of all local authorities. **Packaging** : It is recommended to avoid or reduce waste generation as much as possible. Recycle

		packaging waste. Consider incineration or landfilling only if recycling is not possible.
	Waste codes / waste designations according to LoW:	06 01 06* other acids

14 SECTION 14 : TRANSPORT INFORMATION

14.1	**UN number**	1759
14.2	**UN proper shipping name**	CORROSIVE SOLID, N.O.S. (Urea phosphate)
14.3	**Transport hazard class(es)**	8 
	ADR **IMDG** **OACI/IATA**	ADR/RID Hazard identification number: 80 Tunnel code (E) IMDG : Marine pollutant : No Emergency schedules (EmS) : F-A, S-B
14.4	**Packing group**	II
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.
14.7	**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Non applicable
14.8	**IMSBC**	Bulk Cargo shipping name : FERTILIZERS WITHOUT NITRATES Class 8: corrosive product Group C No MCH

15 SECTION 15 :REGULATORY INFORMATION

15.1	**Safety, health and environmental regulations/legislation specific for the substance or mixture**	
	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	To our knowledge, no other national or governmental regulations apply.
	Règlement UE (CE) n° 1907/2006 (REACH)	Annex XIV: List of substances subject to authorisation: none of the components are listed
15.2	**Chemical safety assessment**	Finished

16 SECTION 16 : OTHER INFORMATION

16.1	**Abbreviations and acronyms:**	ETA = Acute Toxicity Estimation CLP = Regulation 1272/2008/EC on classification, labelling and packaging of substances and mixtures DNEL = Derived no-effect dose DMEL = Derived no-effect dose EUH = Specific hazard statement CLP CPSE = Predicted no-effect concentration RRN = REACH registration number PTB = Persistent, Toxic and Bioaccumulative tPtB = Very persistent and very bioaccumulative bw = Body mass
16.2	**Key literature references and sources for data**	Regulation (EC) 1907/2006 of the European Parliament (REACH) Regulation (EC) 1272/2008 of the European Parliament (CLP) Regulation (EC) 790/2009 of the European Parliament (I Atp. CLP) Regulation (EC) 453/2010 of the European Parliament Regulation (EC) 286/2011 of the European Parliament (II Atp. CLP) The Merck index. Ed. 10 Handling and chemical safety Niosh - Register of toxic effects of chemical substances INRS - Toxicological Data Sheet Patty - Industrial hygiene and toxicology N.I. Sax - Dangerous properties of Industrial Materials - 7 Ed., 1989 ECHA website EU REACH IUCLID5 CSR. National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda Registry of Toxic Effects of Chemical Substances. IHS, 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada.Règlement (CE) n ° 1272/2008 Annexe VI.
16.3	**Indication of changes:**	Date of revision: 03/01/2022 Previous version date: 15/02/2020 Version :5 Modification: Section 1.3, Company nameModifications in section 5.3
16.4	**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:**	Classification Skin Corr./Irrit. 1B H314 Justification Calculation method
	Relevant H-statements (number and full text):	H314 Causes severe skin burns and eye damage.
	Full text of the classifications[CLP/SGH]	Skin Corr./Irrit. 1B, H314: DERMAL CORROSION/CUTANEOUS IRRITATION - Category 1B
	Full text of the short R-phrases	R34- Causes burns.
	Full text of classifications[DSD/DPD]	C - Corrosive
	Note	This Safety Data Sheet complies with the requirements laid down in Reg. 830/2015/EU. It does not 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.

Safety data sheet
In accordance with Regulation (EU) 2015/830

pH Test Kit

Date of writing: 01 January 2010 Version No. 3 Revision date 03/01/2022

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

Product identifier

1.1 A. Trade name: pH TEST KIT

Relevant identified uses of the substance or mixture and uses advised against The pH test kit is a liquid pH tester that covers a pH range of 4.0 to 8.5

1.2

1.3 Details of the supplier of the safety data sheet

Company name	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 number

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

1.4

2 SECTION 2: HAZARD IDENTIFICATION

2.1 Classification of the mixture

Reg. 1272/2008/CLP	According to Regulation No. 1272/2008 (CLP), the product is considered toxic if swallowed.
Additional information	
Hazards for humans	Yes
Environmental risks	No
Physico-chemical hazards	No
Other hazards	No

2.2 Labelling elements

In accordance with Reg. 1272/2008/CLP and its adaptations

Danger pictogram	Yes 
Danger word	Danger
Hazardous substances to be indicated on the label	Methanol
Hazard statement	H371 Suspected risk of serious organ damage H301 Toxic if swallowed
Warning statement	Phrases P P102 Keep out of reach of children
Additional hazard information (EU)	None

2.3 Other hazards

Reg. 1272/2008/CLP	None
For PBT and vPvB assessment, see section 12.5	The product does not meet the criteria for persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB) substances

3 SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances Not applicable

Mixtures Not applicable

3.2

Name pH Test Kit

Description The pH Test Kit is a liquid tester that covers a pH range of 4.0 to 8.5. It includes a sample tube, reagent and color comparison card. It makes testing easy and reliable.

Chemical name	Concentration (%)	CAS No.
Metanol	5-10	67-56-1

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

	In case of eye contact	Rinse immediately with plenty of water, holding the eyelids wide open, and seek medical attention.
	In case of skin contact	Wash thoroughly with soap and water. Remove impregnated clothing.
	In case of ingestion/aspiration	Do not induce vomiting, seek medical advice immediately by showing the product label.
	In case of inhalation	Move victim to fresh air. Keep warm and at rest. In case of breathing difficulty: call a doctor.
	Self protection of first aiders :	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 when performing artificial respiration. Wash your hands thoroughly after giving first aid. If your clothing becomes contaminated with a chemical during first aid treatment, change your clothing.
	Other data	For further details on first aid, including but not limited to more serious health effects, the physician may consult the Toxicological Information Centre, hotline: see section 1.4
4.2	**Main symptoms and effects, acute and delayed**	No known effect.
4.3	**Indication of any immediate medical attention and special treatment needed**	If decomposition products are inhaled in a fire, symptoms may be delayed. The exposed person may need to be placed under medical supervision for 48 hours.

5 SECTION 5: FIRE FIGHTING MEASURES

5.1	**Extinguishing media**	The product is not flammable. Low fire risk due to the flammability characteristics of the product under normal conditions of storage, handling and use. **Suitable extinguishing media** : If combustion is maintained due to improper handling, storage or use, the following extinguishing agents may be used: carbon dioxide (CO_2), foam, chemical powders and, in the event of a large fire, also water spray. **Unsuitable extinguishing media :** In case of fire, do not use : Water jet
5.2	**Special hazards arising from the substance or mixture**	Due to its flammability characteristics, the product does not present a fire hazard under normal conditions of storage, handling and use. A fire in the surrounding area will often produce thick black smoke. Exposure to the composition products can be a health hazard. Do not breathe the fumes.
5.3	**Advice to firefighters**	<u>Protective actions to be taken when fighting the fire</u> Quickly isolate the area by evacuating all people from the area near the incident in case of fire. Do not take any action involving personal risk or without proper training. Move containers away from the fire if it can be done without risk. Use water or water spray to keep fire exposed containers cool. <u>Appropriate protective equipment</u> The product is not combustible. In case of fire in the surrounding area, extinguishing media and appropriate protective equipment for other materials present (full protective

clothing and personal respiratory equipment), complying with EN469 for a basic level of protection for chemical incidents, can be used. Have a minimum of emergency facilities or intervention elements (fire blankets, first aid kit...) according to Directive 89/654/EC.

5.4 **Other information**

Additional provisions :
Respond in accordance with the Internal Emergency Plan and the Information Sheets for Accident Response and Other Emergencies. Remove all sources of ignition. In case of fire, refrigerate containers and storage tanks of products that may ignite and explode due to high temperatures. Avoid spillage of fire extinguishing materials into water.

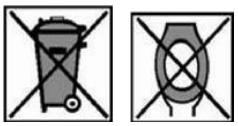
6 SECTION 6: ACCIDENTAL RELEASE MEASURES

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

For non-emergency personnel: Ensure good ventilation.
In case of accidental release of a large quantity, evacuate all personnel and allow access only to trained operators with appropriate personal protective equipment. (See section 8)

For emergency responders: Responders will be equipped with appropriate personal protective equipment. (See section8)

6.2 **Environmental precautions**



Avoid contamination of sewers, surface water and groundwater. If this occurs, inform the appropriate authorities.

6.3 **Methods and materials for containment and cleaning-up**

For containment : Sewer cover

For cleaning up : Collect spilled material by mechanical means and wash away with water. Provide adequate ventilation of the spill area. The contaminated material must be disposed of in accordance with the provisions of point 13.

Other Information: Do not allow spilled material to come into contact with combustible or non-combustible materials. Cleanup personnel should wear protective equipment to protect skin and eyes and to protect against vapors.
Recover the product as much as possible. Follow local legislation.

6.4 **Reference to other sections**

Collect leftovers in an identified container: see item 13 for disposal.
Personal protective equipment: see section 8
Withdrawal Considerations: See Section 13.

7 SECTION 7: HANDLING AND STORAGE

7.1	**Precautions for safe handling**	Avoid formation of airborne particles and dispersion of the product in the air. Use adequate ventilation in areas where airborne particles are growing. 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.
7.2	**Necessary conditions to ensure safe storage, Including any incompatibilities**	Ensure adequate local ventilation or extraction. Store in a cool, dry place. Keep container tightly closed, upright, in a dry, well-ventilated place. Close containers before and after each use to avoid sources of moisture or heat. Store in labelled containers. Store in areas with waterproof pavement if possible.
7.3	**Specific end uses**	No specific end uses. Good practice: keep in closed containers. Close containers before and after each use to avoid sources of moisture or heat. Store in areas with impervious pavement.

8 SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1	**Control parameters**	Not applicable Use good industrial hygiene practices
8.2	**Exposure controls**	
	Appropriate technical control	No particular control
	Personal protective measures, such as personal protective equipment (PPE)	Use personal protective equipment 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. Personal protective equipment must be appropriate to the risk, kept clean and properly maintained in accordance with the provisions of the Labour Code.
	Eye and face protection	It is necessary to wear protective glasses in accordance with the NF EN166 standard before handling any chemical products.
	Skin protection	Hands: Wear appropriate protective gloves for prolonged or repeated contact with the product. Use appropriate protective gloves resistant to chemical agents in accordance with standard NF EN374.
	Respiratory protection	Ensure adequate ventilation, especially in enclosed areas.
	Body protection	Wear appropriate protective clothing. After contact with the product, all soiled body parts should be washed.
	Environmental protection measures	No data available

9 SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on essential physical and chemical properties

Aspect	Physical state: All compounds in pH Test Kit are in aqueous solution. Color : Dark Green
Smell	Alcohol
pH	3.5
Melting point	Not applicable
Freezing point	Not determined

Initial boiling point or boiling range	Not determined
Flash point	Not determined
Evaporation rate or index	Not determined
Flammability	Non-flammable
Upper/lower flammability limits (UEL, UEL) or upper/lower explosive limits (UEL, UEL)	Not applicable
Vapor pressure	Not determined
Vapor density	Not determined
Relative density	1.108
Solubility	Completely soluble
n-octanol/water partition coefficient	Not determined
Auto-inflammation temperature	Not determined
Decomposition temperature	Not determined
Viscosity	Not determined
Explosive properties	Not determined
Oxidizing properties	Not determined
Refractive index	Not determined
Rotating power	Not determined

9.2 **Other information**

No

10 SECTION 10: STABILITY AND REACTIVITY

10.1 **Reactivity**

No dangerous reactions expected if stored according to the technical instructions of the chemicals.

10.2 **Chemical stability**

pH Test Kit is stable at room temperature in closed packages and under normal storage and handling conditions.

10.3 **Possibility of dangerous reactions**

No risk of dangerous reactions under normal conditions of use and storage. Avoid: strong oxidizing agents.

10.4 **Conditions to be avoided**

No special conditions to avoid. Follow normal precautionary practices regarding chemicals.

10.5 **Incompatible materials**

No incompatible materials.

10.6 **Hazardous decomposition products**

None of the components of the pH Test Kit are subject to hazardous polymerization.

11 SECTION 11: TOXICOLOGICAL INFORMATION

11.1 **Information on toxicological effects**

	Acute toxicity			
	Result	Dose	Type	Exhibition
Methanol	Oral LD50	100 mg/Kg	Rat	Not applicable
	Dermal LD50	300 mg/Kg	Rabbit	Not applicable
	LC50 inhalation	3 mg/L	Rat	4H

(a) Acute toxicity b) Skin Corrosion / Skin Irritation (c) Serious eye damage/eye irritation (d) Respiratory or skin sensitization	No data available
(e) Germ cell mutagenicity (f) Carcinogenicity (g) Reproductive toxicity (h) Specific target organ toxicity - single exposure (i) Specific target organ toxicity - repeated exposure (j) Aspiration hazard	No data available
Information on likely routes of exposure	Ingestion: Ingestion of may cause gastrointestinal distress with abdominal pain, nausea, vomiting and diarrhea. Inhalation: No known significant effects or critical hazards. Skin exposure: No known significant effects or critical hazards. Eye exposure: Mild irritation. No known significant effects or critical hazards.
Symptoms related to physical, chemical and toxicological characteristics	No known symptoms
Delayed and immediate effects, and chronic effects of short and long term exposure	No known health effects
Interactive effects	Data not known
Lack of specific data	No data available
Mixtures	No data available
Information on mixtures and information on substances	Mixture does not contain substances subject to registration. No known adverse effects or symptoms resulting from exposure to the mixture or its components.
Other information	Respect good industrial hygiene practices

12 SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Product/ingredient	Result	Acute toxicity	Species Genus
Metanol	LC50	15400 mg/L (96 h)	Lepomis macrochirus Fish
	EC50	12000 mg/L (96 h)	Nitrocra spinipes Crustacea
	EC50	530 mg/L (168 h)	Microcystis aeruginosa Algae

12.2 Persistence and degradability — No data available to the best of our knowledge

12.3 Bioaccumulative potential — No data available on the mixture at the present time

12.4 Mobility in soil — No data available to the best of our knowledge. Waste generation should be avoided or minimized to the extent possible, and discharge into sewers or waterways should be avoided.

12.5 Results of PBT and vPvB assessments — No data available

12.6	**Other adverse effects**	No data

13 SECTION 13: DISPOSAL CONSIDERATIONS

13.1	**Methods of waste treatment**	Do not discharge into drains or waterways. Waste: The management of waste is done without endangering human health and without harming the environment, and in particular without creating a risk for water, air, soil, fauna and flora. Recover the product as much as possible. Recycle or dispose of in accordance with applicable laws, preferably through a licensed collector or company. Disposal of product/packaging: Do not discharge into drains or waterways. Residues and empty containers must be handled and disposed of in accordance with the relevant local/ national legislation. Follow the provisions of Directive 2008/98/EC on waste management. The pH Test Kit can be used in the same way as any industrial fertilizer. Recover the product as much as possible. Follow local legislation.
	Waste list code	Not determined

14 SECTION 14: TRANSPORT INFORMATION

Non-hazardous transport. In the event of an accident and spillage of the product, proceed according to point 6

14.1	**Number UN**	Non-hazardous transport
14.2	**United Nations shipping name**	Non-hazardous transport
14.3	**Transport hazard class(es)**	
	ADR **IMDG** **ICAO/IATA**	Non-hazardous transport
14.4	**Packaging group**	Non-hazardous transport
14.5	**Environmental hazards**	Non-hazardous transport
14.6	**Special precautions to be taken by the user**	Do not transport with food products.
14.7	**Transport in bulk in accordance with MARPOL Annex II and the IBC Code**	Non-hazardous transport

15 SECTION 15: REGULATORY INFORMATION

15.1	**Safety, health and environmental regulations/legislation specific to the substance or mixture**	
	Reg. 1272/2008/EC	The product does not contain any substances that may be classified as carcinogens. 1 or 2 according to Reg.1272/2008/EC and subsequent updates.

	Reg. 830/2015/EC (REACH)	Not applicable
	Special risks	No
15.2	**Chemical safety assessment**	Evaluation not performed

16 SECTION 16: OTHER INFORMATION

16.1 Abreviations and acronyms

ADR: European Agreement concerning the Carriage of Dangerous Goods by Road
CAS NUMBER: Chemical Abstract Service number
EC50: Concentration that gives effect to 50% of the test population.
EC NUMBER: Identification number in ESIS (European Existing Substances Archive)
CLP: Regulation EC 1272/2008
DNEL: Calculated No Effect Level
EmS: Emergency calendar
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
IATA DGR: International Air Transport Association Dangerous Goods Regulations
IC50: Immobilizing concentration of 50% of the test population.
IMDG: International Maritime Dangerous Goods Code
IMO: International Maritime Organization
INDEX NUMBER: Identification number VI Annex to CLP
LC50: Lethal concentration 50
LD50: Lethal Dose 50 %.
OEL: Occupational Exposure Level
PBT: Persistent, Bioaccumulative and Toxic according to REACH
PEC: Predicted Environmental Concentration
PEL: Predicted Exposure Level
PNEC: Predicted No Effect Concentration
REACH: Regulation EC 1907/2006
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
TLV: Threshold Limit Value
TLV CEILING: Concentration that must not be exceeded at any time during the working exposure
TWA STEL: Short-term exposure limit
TWA: Time Weighted Average Exposure Limit
VOC: Volatile Organic Compound
vPvB: Very Persistent and Bioaccumulative according to REACH

16.2 Bibliographic references

Regulation (EC) 1907/2006 of the European Parliament (REACH)
Regulation (EC) 1272/2008 of the European Parliament (CLP)
Regulation (EC) 790/2009 of the European Parliament (I Atp. CLP)
Regulation (EC) 453/2010 of the European Parliament Regulation (EC) 286/2011 of the European Parliament (II Atp. CLP)
The Merck Index. Ed. 10 Chemical Handling and Safety
Niosh - Chemical Toxicity Registry
INRS - Toxicological data sheet
Patty - Industrial Hygiene and Toxicology

N.I. Sax - Dangerous properties of Industrial Materials - 7 Ed. 1989

ECHA website

16.3 Changes compared to the previous version

Date of revision: 03/01/2022

Previous version date: 04/03/2020

Version :3

Modification: Section 1.3, Company name

16.4 Note

This sheet is for information purposes only.

This safety data sheet complies with the requirements established by Reg. 830/2015/EU. It does not exempt the user from knowing and applying all the documents governing his activity. The user will take under his responsibility the precautions related to the specific use of the product. All regulatory requirements listed are intended simply to assist the recipient in fulfilling 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 to the best of its knowledge and belief at the time of writing (safety data sheets for the active ingredients compiled by the manufacturer and other literature). They are given in good faith. Furthermore, 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/she is not responsible for anything other than the texts 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.