

	SAFETY DATA SHEET in accordance with Article 31 of Regulation (EC) 1907/2006 (REACH) and Regulation (EU) 2020/878			
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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name: AF MINUS pH
 Chemical name: Not applicable
 EC No: Not applicable
 CAS No: Not applicable
 Index No: Not applicable
 REACH No: Not applicable
 UFI No: Not applicable

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

1.2.1. Relevant identified uses

Professional product for lowering pH value in freshwater aquarium.

1.2.2. Uses advised against

None.

1.3. Details of the supplier of the safety data sheet

Aquaforest sp. z o.o. sp. k.
 ul. Starowiejska 18
 32-800 Brzesko, POLAND
 email: info@aquaforest.eu
 Tel.: +48 14 691 79 79

1.4. Emergency telephone number

Emergency number: 112
 Manufacturer number: +48 14 691 79 79 (working days 8:00 am – 4:00 pm)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

According to the Regulation (EC) No 1272/2008:

Product is not classified as hazardous

Physical hazards: None
 Health hazards: None
 Environmental hazards: None

2.2. Label elements

According to the Regulation (WE) 1272/2008:

Pictograms:

not applicable

Signal word:

not applicable

Hazard statements:

not applicable

Precautionary statement (recommended):

P102 Keep out of reach of children
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

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lenses, if present and easy to do. Continue rinsing.

Additional labelling requirements:

not applicable

2.3. Other hazards

Product does not met PBT or vPvB criteria according to XIII of REACH regulation.

Product has low pH value (acidic). Classification as hazardous is not required, however handle the product with caution.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.2. Mixtures

Product is a mixture.

Name	Identifiers	Concentration [% w/w]	CLP Classification
Hydrochloric acid*	CAS: 7647-01-0	2,5 - <10	Met. Corr. 1, H290 Skin Corr. 1B, H314** STOT SE 3a, H335**
	EC: 231-595-7		
	Index No: 017-002-01-X		
	REACH reg. No: 01-2119484862-27-XXXX		

Full text of H phrases is provided in Section 16.

* Hazardous ingredient is known to have established TLV's in work environment in several countries. Checking the relevant national regulations in this regard is mandatory.

** Ingredient has established Specific Concentration Limits – see Section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General recommendations

The first step is to remove the injured person from a polluted environment. Take off any contaminated clothing. Never give anything by mouth to an unconscious person. In case of health problems, immediately contact doctor, show MSDS of product.

Protection of personnel providing first aid

Do not take any action that would pose a risk to the rescuer, unless suitable trained and aware of risks.

Contamination of the skin

Wash with water and soap, rinse thoroughly. In case of persistent skin irritation get medical advice. Take off contaminated clothing and shoes.

Contamination of the eyes

Flush contaminated eyes with wide-open eyelids a continuous, gentle stream of water for at least 10 minutes. Remove contact lenses if possible and continue rinsing. Get medical help immediately in case of persistent irritation or damage to eyes.

Inhalation

Remove the victim from area of contamination. Provide fresh air and keep warm. Get medical help in case of any health problems.

Ingestion

After ingestion rinse mouth with water, drink water. Do not induce vomiting unless instructed so by medical personnel. If vomiting occurs, keep victim's head low to avoid getting vomit into lungs. Get medical help immediately. In case of unconsciousness place victim in safe, horizontal position and get immediately call for medical help

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

Acute symptoms

Inhalation: May be irritating if product mist is inhaled
Skin contamination: May cause skin irritation
Eye contamination: May cause eye irritation
Ingestion: May be irritating to the mucous membranes of the alimentary tract

Delayed symptoms – no data

Effects of exposure – no data

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

Note to Physician: no specific antidote is known. The decision on how to proceed is made by a doctor after a thorough assessment of the injured person's condition. Symptomatic treatment.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

For large fire: powders, CO₂, alcohol resistant foams, water mist
Large fires: water mist, foams

Unsuitable extinguishing media:

Not known.

5.2. Special hazards arising from the substance or mixture

Product is not flammable. During fire there is a risk of dangerous decomposition products and toxic gases.

5.3. Advice for firefighters

Apply the breathing apparatus and full protective clothing for firefighting. Vapours released during fire cover with water mist.

General: Remove from the endangered area all unauthorized persons, not involved in extinguishing the fire, order evacuation if necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

Evacuate all personnel from contaminated area. Provide adequate ventilation or provide suitable mask. Do not breath mist/aerosol of the product. Use appropriate personal protection measures.

For emergency responders:

Follow instructions, use appropriate personal protection measures.

6.2. Environmental precautions

Avoid entering drains, groundwater, soil and open water courses.

6.3. Methods and material for containment and cleaning up

Treat leakage with appropriate sorbent (sand, sawdust, diatomaceous earth, universal sorbent), collect into empty container, label it and allocate for disposal. Clean contaminated surface with water.

6.4. Reference to other sections

Personal protective equipment – section 8

Waste disposal – section 13

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SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Industrial hygiene

- ensure good ventilation (overall and local exhausted ventilation)
- ensure place for eyes and skin rinsing
- wash hands with soap and water before eating, smoking and after work
- use general caution while working with chemical substances

Specific measures against fire and explosion: no specific requirements.

7.2. Conditions for safe storage, including any incompatibilities

Store in dry rooms in closed containers. Avoid heat sources, fire, sparks. Keep away from children. Avoid contact with food and feeding stuff.

7.3. Specific end use(s)

No information about uses other than those mentioned in subsection 1.2.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Occupational Exposure Limit Value:

There are exposure standards allocated to components of this product in several countries:
hydrogen chloride (CAS: 7647-01-0). Mandatory check the TLV's provided for particular country.

DNELs (Derived No Effect Levels) available for mixture components:

Hydrogen chloride (CAS: 7647-01-0):								
Exposure route	WORKERS				GENERAL POPULATION			
	Systemic Effects		Local Effects		Systemic Effects		Local Effects	
	Long-term	Acute	Long-term	Acute	Long-term	Acute	Long- term	Acute
Inhalation	n.h.i.	n.h.i.	8 mg/m³	15 mg/m³	n.h.i.	n.h.i.	8 mg/m³	15 mg/m³
Dermal	n.h.i.	n.h.i.	h.h. (n.t.d.)	h.h. (n.t.d.)	n.h.i.	n.h.i.	h.h. (n.t.d.)	h.h. (n.t.d.)
Oral	-	-	-	-	n.h.i.	n.h.i.	n.h.i.	n.h.i.
Eye	m.h. (n.t.d)				m.h. (n.t.d)			
n.h.i. – no hazard identified h.h. (n.t.d.) – high hazard (no threshold derived) m.h. (n.t.d) – medium hazard (no threshold derived) n.d. – no data								

8.2. Exposure controls

Technical exposure controls:

Mechanical general or local ventilation.

Personal protection measures:

The need of use and selection of appropriate personal protective equipment should depend on type of threat posed by the product, workplace conditions and handling of the product. Use protective equipment from reputable manufacturers.

Respiratory protection:

is not necessary under normal conditions with sufficient ventilation or outdoor. Required during exposure to high concentrations of vapours/mist/aerosol. Wear mask or respirator completed with the filter type K or better.

Hand protection: Wear protective gloves.

Material of gloves must be resistant to the product. As the product is a mixture of several substances, the resistance of material of gloves can't be calculated in advance and therefore has to be checked before use.

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From the manufacturer's advice should be obtained information about the time of the penetration of substances and such time must be respected. The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. It is recommended to change gloves and replace them immediately if you notice any signs of wear, damage (rupture, perforation) or changes in appearance (color, flexibility, shape).

Eye protection:

protective glasses (recommended)

Skin protection:

protective clothing

Protective equipment standards:

EN 140:2001 Respiratory protective devices – Half masks and quarter masks – Requirements, testing, marking.

EN 143:2004 Respiratory protective devices – Particle filters – Requirements, testing, marking.

EN 149+A1:2010 Respiratory protective devices – Filtering half masks to protect against particles – Requirements, testing, marking.

EN 14387+A1:2010 Respiratory protective devices – Gas filter(s) and combined filter(s) – Requirements, testing, marking.

EN 374-1:2017-01 Protective gloves against dangerous chemicals and micro-organisms – Part 1: Terminology and performance requirements for chemical risks.

EN 374-2:2015-04 Protective gloves against dangerous chemicals and micro-organisms – Part 2: Determination of penetration resistance.

EN 16523-1+A1:2018-11 Determination of material resistance to permeation by chemicals – Part 1: Permeation by potentially hazardous liquid chemicals under conditions of continuous contact.

EN 166:2005 Personal eye protection. Specifications.

EN 14605+A1:2010 Protective clothing against liquid chemicals – Performance requirements for clothing with liquid-tight (Type 3) or spray-tight (Type 4) connections, including items providing protection to parts of the body only (Types PB [3] and PB [4]).

EN ISO 20344:2012 Personal protective equipment – Test methods for footwear

Environmental exposure controls

Do not allow to enter large amounts of product into ground water, sewage, waste water or soil.

PNECs (Predicted No Effect Concentrations) for mixture components:

Hydrogen chloride (CAS: 7647-01-0):

Environment compartment

Environment compartment	PNEC
Freshwater:	No data
Intermittent releases (freshwater):	No data
Marine water:	No data
Intermittent releases (marine water):	No data
Sewage treatment plant:	No data
Sediment (freshwater):	No data
Sediment (marine water):	No data
Air:	No data
Soil:	No data
Hazard for Predators:	No data

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Colour	Colourless
Odour	No data
Melting point/freezing point	Approx. 0°C

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Boiling point or initial boiling point and boiling range	Approx. 100°C
Flammability	Not applicable
Lower and upper explosion limit	Not applicable
Flash point	No data
Auto-ignition temperature	No data
Decomposition temperature	No data
pH	< 1
Kinematic viscosity	No data
Solubility	Fully miscible
Partition coefficient n-octanol/water (log value)	Not applicable
Vapour pressure	No data
Density and/or relative density	No data
Relative vapour density	No data
Particle characteristics	Not applicable

9.2. Other information

Information with regard to physical hazard classes

No additional data.

Other safety characteristics

No additional data.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Product is not reactive under normal conditions of storage and handling.

10.2. Chemical stability

Product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Product has low pH value, avoid contact with materials reacting with acids.

10.4. Conditions to avoid

No data

10.5. Incompatible materials

All materials reacting dangerously with acids

10.6. Hazardous decomposition products

Product does not decompose.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Classification of the product was conducted by calculation method according to regulation 1272/2008 based on the content of hazardous ingredients.

Acute toxicity:

Acute Oral Toxicity: product does not met criteria for classification, $ATE_{mix} > 2000$ mg/kg

Acute Dermal Toxicity: product does not met criteria for classification, $ATE_{mix} > 2000$ mg/kg

Acute Inhalation Toxicity: product does met criteria for classification, $ATE_{mix} > 5$ mg/l

Skin corrosion/irritation:

based on available data, the classification criteria are not met.

Serious eye damage/irritation:

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based on available data, the classification criteria are not met.

Respiratory or skin sensitisation:

based on available data, the classification criteria are not met.

Germ cell mutagenicity:

based on available data, the classification criteria are not met.

Carcinogenicity:

based on available data, the classification criteria are not met.

Reproductive toxicity:

based on available data, the classification criteria are not met.

STOT-single exposure:

based on available data, the classification criteria are not met.

STOT-repeated exposure:

based on available data, the classification criteria are not met.

Aspiration hazard:

based on available data, the classification criteria are not met.

Potential health effects

Ingestion:

no data

Inhalation:

no data

Skin contact:

May cause irritation

Eye contact.

May cause irritation

11.2. Information on other hazards

No additional data

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Classification of the product was conducted by calculation method according to regulation 1272/2008 based on the content of hazardous ingredients.

Product is not classified as environmentally hazardous.

12.2. Persistence and degradability

No data

12.3. Bioaccumulative potential

No data

12.4. Mobility in soil

No data

12.5. Results of PBT and vPvB assessment

Product does not meet the criteria for PBT or vPvB according to Annex XIII of REACH regulation

12.6. Endocrine disrupting properties

No data

12.7. Other adverse effects

No data

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SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products:

Residues of unused product should be kept in original containers. Deliver to company authorized for collection, transport and utilization of wastes.

Disposing of the packaging:

Recycling or disposal of packaging waste should be conducted according to current local legislation.

SECTION 14: TRANSPORT INFORMATION

Product is not hazardous good in transport

14.1. UN number or ID number

ADR	IMDG Code	IATA DGR
-	-	-

14.2. UN proper shipping name

ADR	IMDG Code	IATA DGR
-	-	-

14.3. Transport hazard class(es)

ADR	IMDG Code	IATA DGR
-	-	-

14.4. Packing group

ADR	IMDG Code	IATA DGR
-	-	-

14.5. Environmental hazards

ADR	IMDG Code	IATA DGR
-	-	-

14.6. Special precautions for user

ADR	IMDG Code	IATA DGR
-	-	-

14.7. Maritime transport in bulk according to IMO instruments

-

SECTION 15: REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006 of the European Parliament and of the Council from 18.12.2006 concerning the Registration, Evaluation, Authorization and Restriction from Chemicals (REACH)
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
- Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- European agreement concerning international road transport of dangerous products (ADR)
- Federal, State and Local regulations.

15.2. Chemical safety assessment

Chemical safety assessment was not conducted for the product.

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SECTION 16: OTHER INFORMATION

Explanation of abbreviations and acronyms used in safety data sheet

Met. Corr. 1, H290 May be corrosive to metals
Skin Corr. 1B, H314 Causes severe skin burns and eye damage
STOT SE 3, H335 May cause respiratory irritation

Specific concentration limits for hydrogen chloride (CAS: 7647-01-0):

Skin Irrit. 2; H315: $10\% \leq C < 25\%$

Eye Irrit. 2; H319: $10\% \leq C < 25\%$

Skin Corr. 1B; H314: $C \geq 25\%$

STOT SE 3; H335: $C \geq 10\%$

ADR European Agreement concerning the International Carriage of Dangerous Goods by Road under framework Directive 94/55/EC, as amended

ATE Acute Toxicity Estimate: acute toxicity values are expressed as (approximate) LD50 (oral, dermal) or LC50 (inhalation) values or as ATEs.

CAS Chemical Abstracts Service

CPR Cardio-pulmonary resuscitation

DNEL derived no-effect level

EC number unique seven-digit identifier assigned to substances for regulatory purposes withing European Inventory of Existing Commercial Chemical Substances (EINECS)

EC50 median effective concentration

EINECS European Inventory of Existing Commercial Chemical Substances

GHS (United Nations) Globally Harmonised System of Classification and Labelling of Chemicals

ICAO International Civil Aviation Organisation

IMDG International Maritime Dangerous Goods Code for the transport of dangerous goods by sea

IUPAC International Union of Pure and Applied Chemistry

LOEC Lowest Observed Effect Concentration

LD50 Lethal Dose; dose at which 50% of the animals will be expected to die.

LC50 Lethal Concentration; standard measure of the toxicity of the surrounding medium that will kill half of the sample population of a specific test-animal in a specified period through exposure via inhalation

NOEC No Observed Effect Concentration

OECD Organisation for Economic Cooperation and Development

PBT Persistent, bioaccumulative and toxic

PNEC Predicted No Effect Concentration

(Q)SAR (Quantitative) Structure-Activity Relationships

SVHC Substance of Very High Concern

UFI Unique Formula Identifier

vPvB very Persistent and very Bioaccumulative

This SDS was prepared in accordance with Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Classification of the product was based on the content of ingredients and according to Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

Training

Before handling with the product, the user should be familiar with the principles of health and safety regarding the handling of chemicals, and in particular undergo appropriate workplace training.

References to key literature and data sources

The safety data sheet for this product has been create on the basis of a safety data sheet provided by the

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manufacturer, literature data, online databases and possessed knowledge and experience, taking into account the currently applicable to actual legislation.

Changes from the previous version of the safety data sheet:

Version 2.2 - adaptation to Regulation 2020/878, editorial changes to Section 1-16

The above information is based on currently available data characterizing the product as well as the experience and knowledge possessed by the manufacturer in this topic. It do not constitute a quality description of the product or promise of specific properties. It should be treated as an aid for safe handling during transport, storage and use of the product. This does not release the user from liability for incorrect use of the above information and from compliance with all legal regulations in this area.

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